



SCIENTIFIC REFERENCE BR  
Sci & Tech Inf Ctr  
NOV 28 1988

Access DB# 244269

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's T.M. Office  
Requester's Full Name: Sin J. Lee

Art Unit: 1795 Phone Number 30 27333 Serial Number: 10/531, 208

Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER  DISK  E-MAIL  
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

P12. See B:b,

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

P12. Search for the compound of formula (1)

of C1. #24

\*\*\*\*\*

1. Search and patent where applicable



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
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 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

## \*BIBDATASHEET\*

CONFIRMATION NO. 6424

Bib Data Sheet

SERIAL NUMBER 10/531,208	FILING OR 371(c) DATE 04/14/2005 RULE	CLASS 430	GROUP ART UNIT 1756	ATTORNEY DOCKET NO. 28955.1048
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## APPLICANTS

Mitsuru Ueda, Tokyo, JAPAN;  
 Hirotoshi Ishii, Chiba, JAPAN;

## \*\* CONTINUING DATA \*\*\*\*\*

This application is a 371 of PCT/JP03/11137 09/01/2003

## \*\* FOREIGN APPLICATIONS \*\*\*\*\*

JAPAN 2002300144 10/15/2002  
 JAPAN 2003112458 04/17/2003

Foreign Priority claimed	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR COUNTRY JAPAN	SHEETS DRAWING	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance				

## Verified and Acknowledged

Examiner's Signature Initials

## ADDRESS

27890

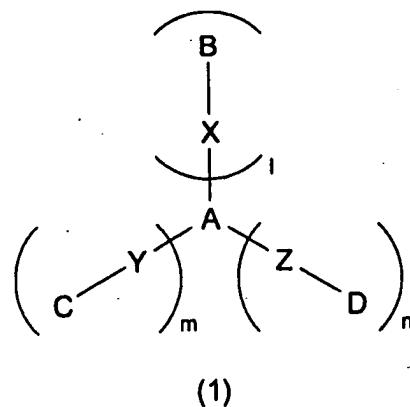
## TITLE

Photoresist base material, method for purification thereof, and photoresist compositions

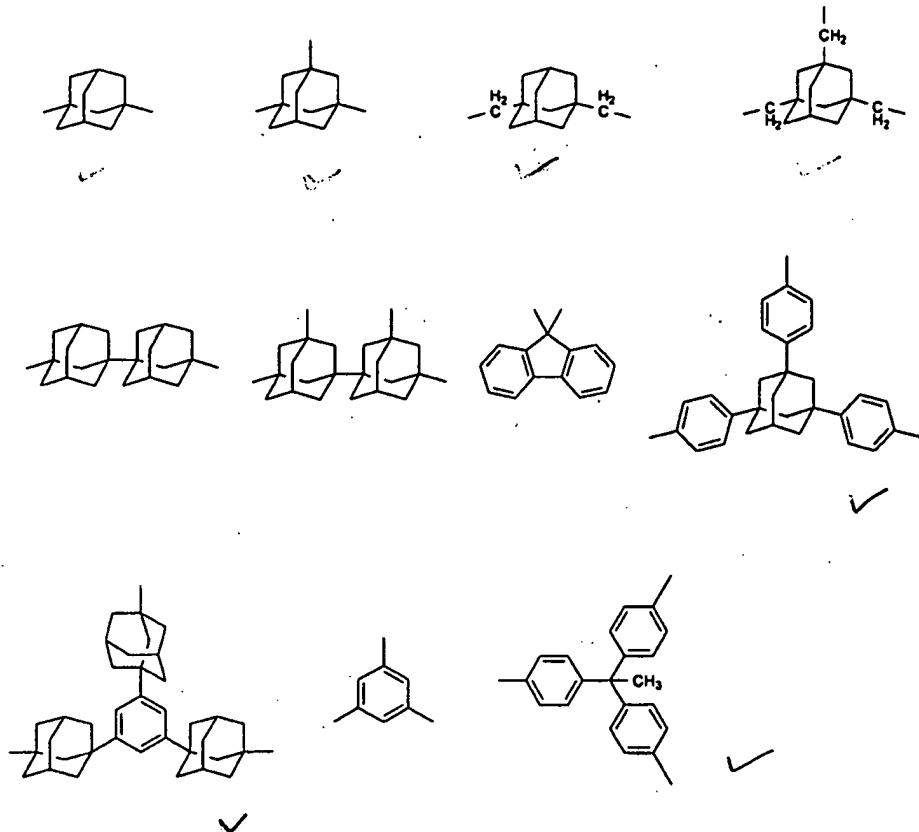
FILING FEE RECEIVED 900	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
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is 4-(tert-butoxycarbonyloxy)benzyl or 3,5-di(tert-butoxycarbonyloxy)benzyl.

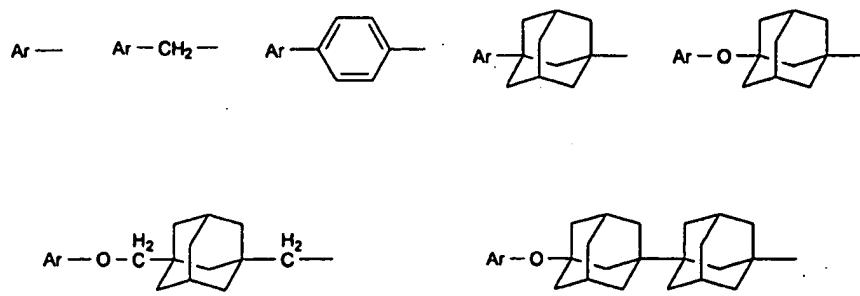
24. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),



wherein A is an organic group selected from the group consisting of



wherein each of B, C and D is independently an extreme ultra-violet reactive group selected from the group consisting of



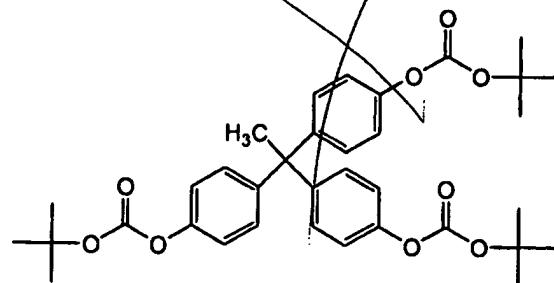
wherein Ar is a phenyl or naphthyl group substituted with RO- and/or ROCO- in

which R, RO- and ROCO are extreme ultra-violet reactive groups or groups having reactivity to the action of a chromophore active to extreme ultra-violet,

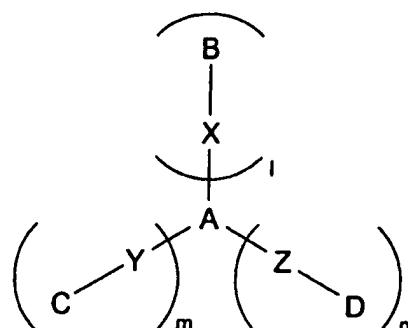
wherein each of X, Y and Z is independently a single bond or an ether bond, and

$l + m + n = 2, 3$  or  $4;$

provided that excluded is the organic compound represented as follows



25. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),

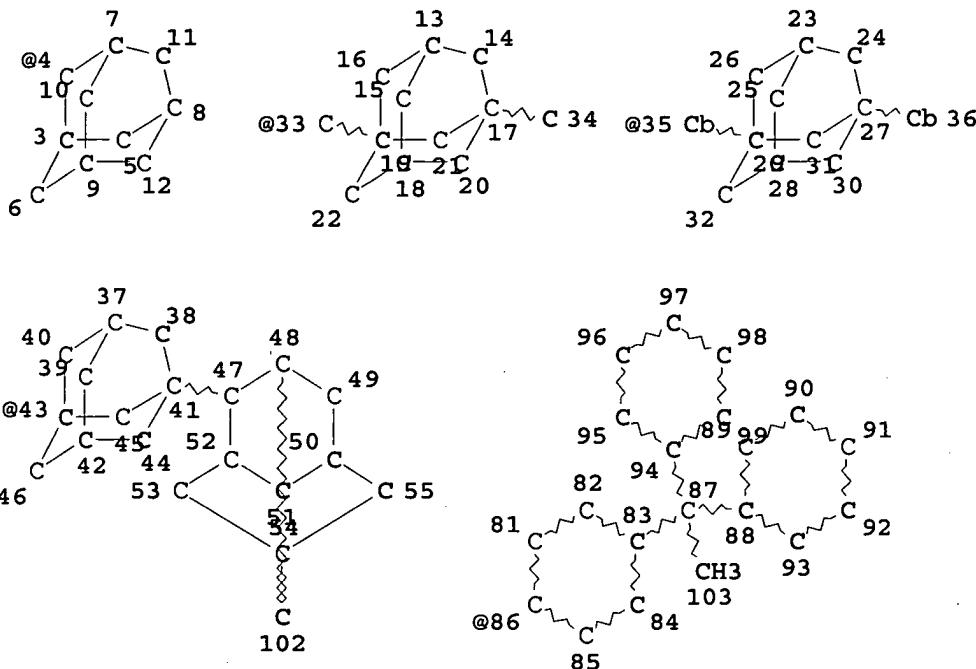


(1)

wherein A is an organic group represented by

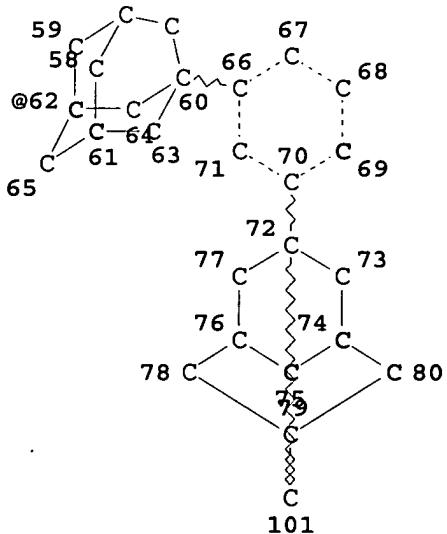
=&gt; d que 161

L8 SCR 1992 OR 2021 OR 2016 OR 2026  
 L22 SCR 2043  
 L38 STR



G1 100 56 57

Page 1-A



Page 2-A

VAR G1=4/33/35/43/86/62

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

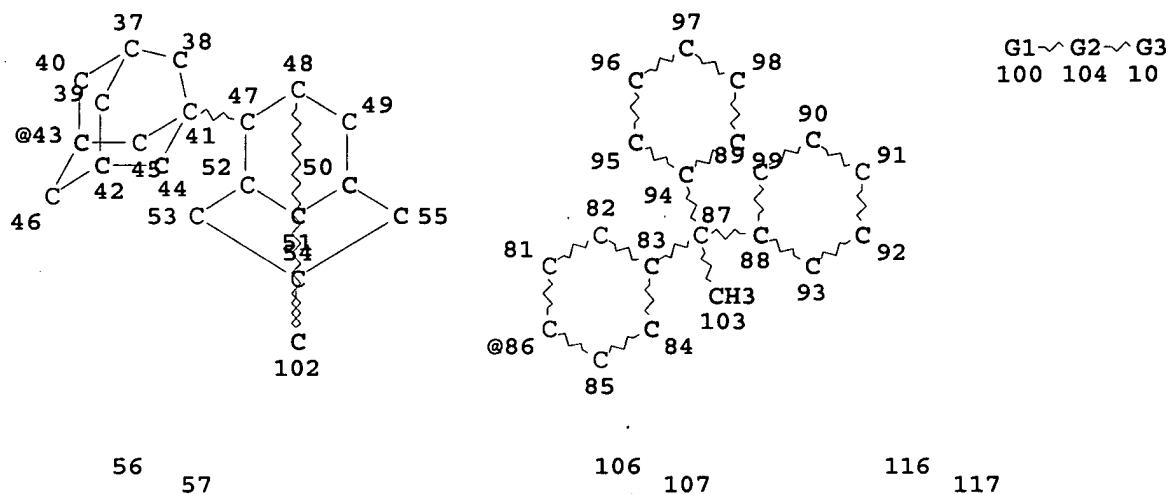
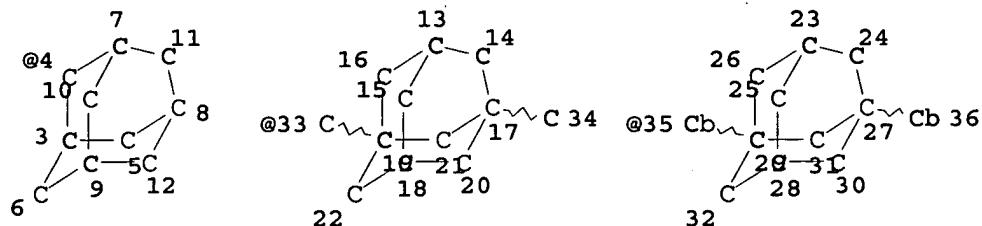
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 101

## STEREO ATTRIBUTES: NONE

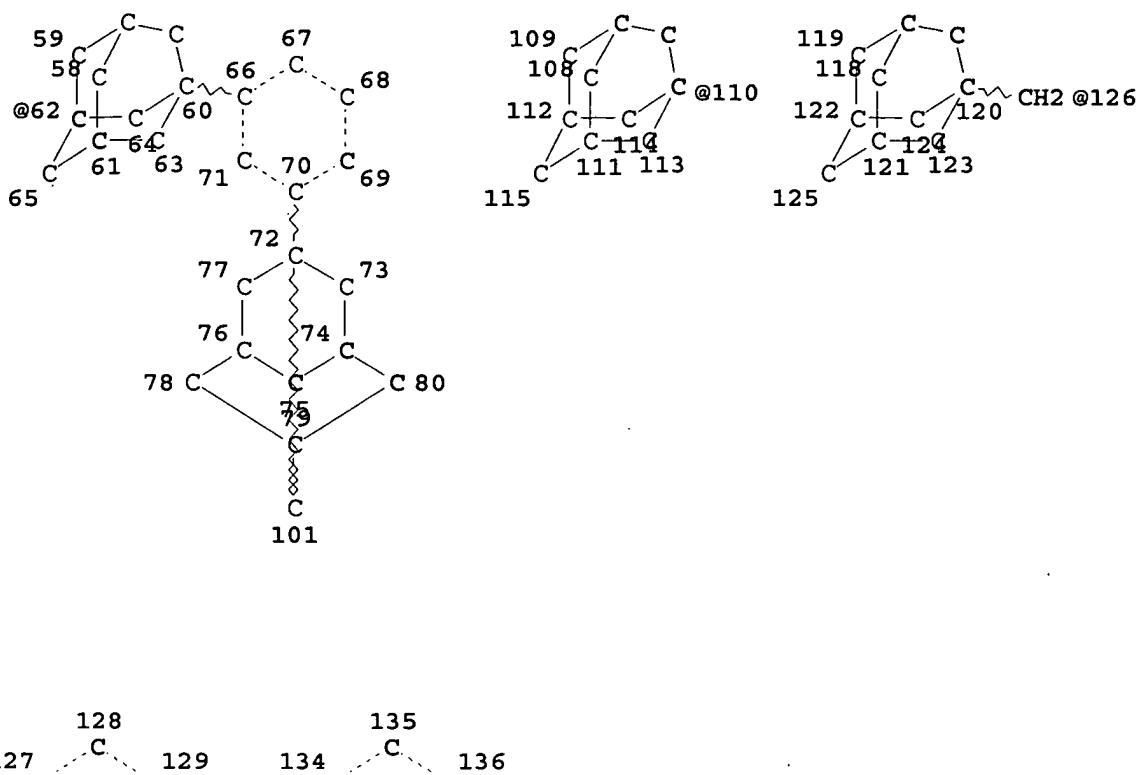
L42 16441 SEA FILE=REGISTRY SSS FUL L38 NOT (L8 OR L22)  
L52 STR



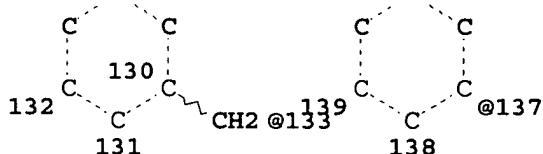
Page 1-A

5

Page 1-B



Page 2-A



Page 3-A

VAR G1=4/33/35/43/86/62

REP G2=(0-1) O

VAR G3=110/126/133/137

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 137

STEREO ATTRIBUTES: NONE

L54	744	SEA FILE=REGISTRY SUB=L42 SSS FUL L52
L56	426	SEA FILE=HCAPLUS ABB=ON PLU=ON L54
L58	30	SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND PHOTOG?/SC, SX
L59	55	SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND ?RESIST?
L60	66	SEA FILE=HCAPLUS ABB=ON PLU=ON L58 OR L59
L61	44	SEA FILE=HCAPLUS ABB=ON PLU=ON L60 AND (1840-2003)/PRY, AY , PY

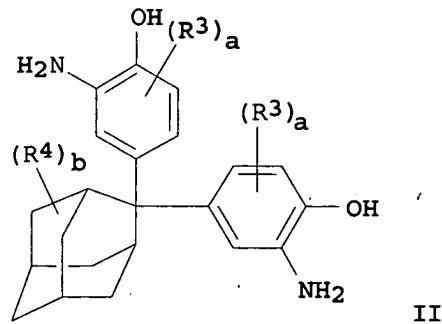
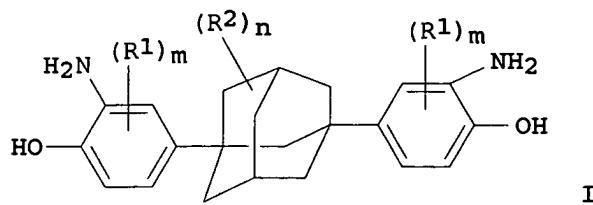
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E21 THROUGH E85 ASSIGNED

=> d 161 1-44 ibib ed abs hitstr hitind

L61 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:756675 HCAPLUS  
 DOCUMENT NUMBER: 141:243182  
 TITLE: Preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivatives and process for production thereof  
 INVENTOR(S): Tanaka, Shinji; Ono, Hidetoshi; Kodoi, Kouichi; Hatakeyama, Naoyoshi  
 PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIIXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004078701	A1	20040916	WO 2004-JP2280	20040226
---				
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004262889	A	20040924	JP 2003-56780	20030304
---				
EP 1602641	A1	20051207	EP 2004-714876	20040226
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, PR, BG, CZ, EE, HU, SK				
US 2006161016	A1	20060720	US 2005-547553	20050901
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PRIORITY APPLN. INFO.:			JP 2003-56780	A 20030304
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			WO 2004-JP2280	W 20040226

OTHER SOURCE(S): MARPAT 141:243182  
 ED Entered STN: 16 Sep 2004  
 GI

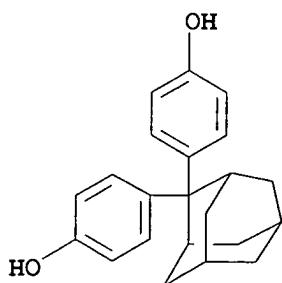


AB The title adamantane derivs. represented by the general formulas (I) [R1, R2 = halo, HO, C1-10 alkyl, C1-10 alkoxy, CO2H, C1-10 alkoxycarbonyl; m = 0-3; n = 0-14; when each m or n is a plural number, a plural number of R1 or R2 are same or different, but the case where R2 = Me is at the bridged position and m = 0 and n = 0 is excluded] and (II) [R3, R4 = halo, HO, C1-10 alkyl, CO2H, C1-10 alkoxycarbonyl; a = 0-3; b = 0-14; each a or b is a plural number, a plural number of R3 or R4 are same or different] are prepared by nitration of bis(4-hydroxyphenyl)adamantane and reduction of the resulting bis(4-hydroxy-3-nitrophenyl)adamantane derivs. These compds. provide novel materials which are excellent in heat **resistance**, mech. characteristics, elec. characteristics, phys. characteristics and so on and are useful as interlayer dielecs. or protection films of semiconductor devices, interlayer dielecs. of multilayer printed circuit boards, cover coats of flexible wiring boards, liquid crystal alignment layers, and so on (no data).

IT 52211-74-2, 2,2-Bis(4-hydroxyphenyl)adamantane  
(preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivs. by nitration of bis(4-hydroxyphenyl)adamantane and reduction of bis(4-hydroxy-3-nitrophenyl)adamantane derivs.)

RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



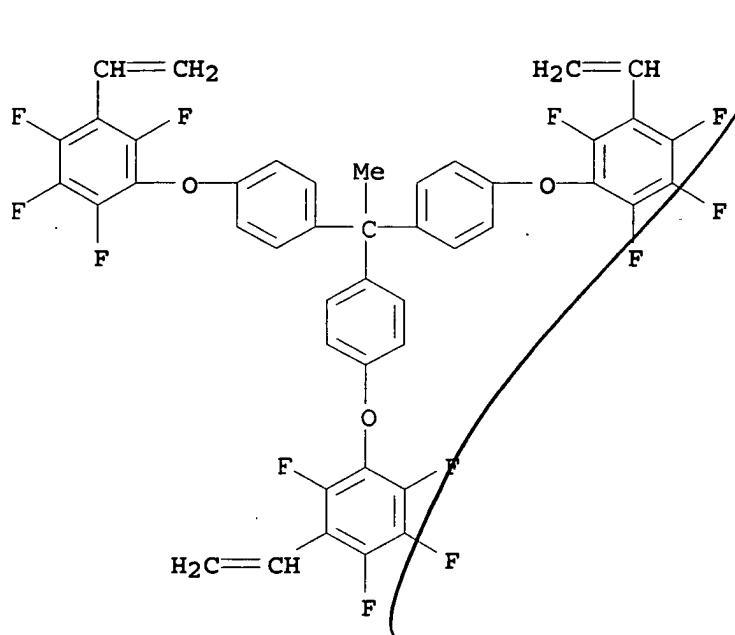
IC ICM C07C215-82  
 ICS C07C213-02; C07C205-22; C07C201-08  
 CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 IT 37677-93-3, 1,3-Bis(4-hydroxyphenyl)adamantane 52211-74-2,  
 2,2-Bis(4-hydroxyphenyl)adamantane  
 (preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivs. by  
 nitration of bis(4-hydroxyphenyl)adamantane and reduction of  
 bis(4-hydroxy-3-nitrophenyl)adamantane derivs.)  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L61 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:534012 HCAPLUS  
 DOCUMENT NUMBER: 141:90579  
 TITLE: Perfluorostyrene compound, and coating solution  
 and optical waveguide device using the compound  
 INVENTOR(S): Kim, Ji-hyang; Kim, Jae-il; Kim, Tae-kyun; Lee,  
 Hyung Jong; Han, Seon Gyu  
 PATENT ASSIGNEE(S): Zen Photonics Co., Ltd., S. Korea  
 SOURCE: U.S. Pat. Appl. Publ., 13 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127632	A1	20040701	US 2003-616889 <--	20030710
KR 2004006591	A	20040124	KR 2002-40901 <--	20020712
US 2005163451	A1	20050728	US 2005-34646 <--	20050113
US 7202324	B2	20070410		
US 2007173592	A1	20070726	US 2007-725398 <--	20070319
PRIORITY APPLN. INFO.:			KR 2002-40901 <--	A 20020712
			US 2003-616889 <--	B1 20030710
			US 2005-34646	A3 20050113

OTHER SOURCE(S): MARPAT 141:90579  
 ED Entered STN: 02 Jul 2004  
 AB A F compound has perfluorostyrene introduced at a terminal end,  
 characterized in that the introduction of perfluorostyrene results in  
 a facile fabrication of thin films by a UV curing or a thermal curing,  
 high thermal stability and chemical resistance, and low optical  
 propagation loss and birefringence when applied to waveguides. The  
 structure of the F compound is represented by  
 $[CH_2:CHC_6F_4Z]_yRf(ZArZrf)x[ZC_6F_4CH:CH_2]_y'$ , where Z = O or S; Rf =  
 aliphatic or aromatic group; y = 1-10, yr' = 0-1; x = 0-200; Ar =  
 MeC\_6F\_4RC\_6F\_4Me or C\_6F\_3MeX; R = direct single bond, CO, SO\_2, S and O,  
 and X = F, Cl, Br and I.  
 IT 713525-84-9P  
 (diluent preparation and copolymer.; perfluorostyrene-terminated  
 photopolymerizable compound for core and cladding layers of optical  
 waveguide device)

RN 713525-84-9 HCAPLUS  
 CN Benzene, 1,1',1''-ethylidynetris[4-(3-ethenyl-2,4,5,6-tetrafluorophenoxy)- (CA INDEX NAME)



IC ICM C08L027-12  
 INCL 524544000; 526242000  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 35, 73  
 IT 713525-84-9P  
 (diluent preparation and copolymer.; perfluorostyrene-terminated photopolymerizable compound for core and cladding layers of optical waveguide device)

L61 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:355223 HCAPLUS  
 DOCUMENT NUMBER: 140:383102  
 TITLE: Photoresist base material, method for purification thereof, and photoresist compositions containing the same  
 INVENTOR(S): Ueda, Mitsuru; Ishii, Hirotoshi  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004036315	A1	20040429	WO 2003-JP11137	20030901

WO 2004036315	B1	20040603
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI,

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,  
 SY, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
 ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG

JP 2004191913 A 20040708 JP 2003-112458 20030417

&lt;--

AU 2003261865 A1 20040504 AU 2003-261865 20030901

&lt;--

EP 1553451 A1 20050713 EP 2003-808872 20030901

&lt;--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

CN 1688939 A 20051026 CN 2003-824240 20030901

&lt;--

US 2005271971 A1 20051208 US 2005-531208 20050414

&lt;--

PRIORITY APPLN. INFO.: JP 2002-300144 A 20021015

&lt;--

JP 2003-112458 A 20030417

&lt;--

WO 2003-JP11137 W 20030901

&lt;--

*Pres.*

OTHER SOURCE(S): MARPAT 140:383102

ED Entered STN: 30 Apr 2004

AB The invention relates to **photoresist** base materials consisting of extreme UV sensitive-organic compds. represented by the general formula (B-X)<sub>1</sub>(C-Y)<sub>m</sub>(D-Z)<sub>n</sub>A: [wherein A is a central structure consisting of an aliphatic group having C1-50, an aromatic group having C6-50 carbon, an organic group bearing both, or an organic group having a cyclic structure formed by repetition of these groups; B to D are each an extreme UV sensitive group, a group exhibiting a reactivity on the action of a chromophore sensitive to extreme UV rays, a C1-50 aliphatic or C6-50 aromatic group having such a group, an organic group having both groups, or a substituent having a branched structure; X to Z are each a single bond or an ether linkage; 1 to n are integers of 0-5 satisfying the relationship: 1 + m + n <u></u> 1; and A to D may each have a heteroatom-bearing substituent]. The invention provides **photoresist** base materials and **photoresist** compns. which enable ultrafine lithog. with extreme UV rays or the like and is suitable for use in semiconductor device fabrication.

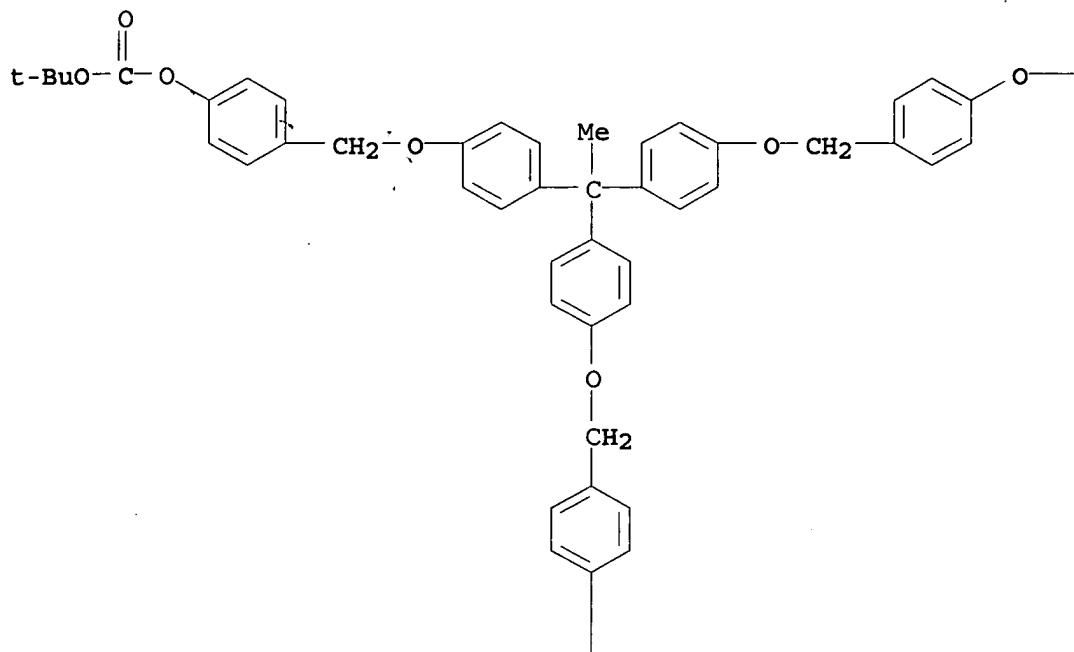
IT 683227-75-0P 683227-76-1P

(photoresist base material, method for purification thereof, and **photoresist** compns. containing the same)

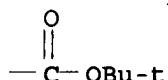
RN 683227-75-0 HCPLUS

CN Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-4,1-phenylene) tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

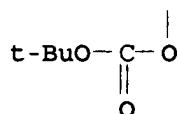
PAGE 1-A



PAGE 1-B



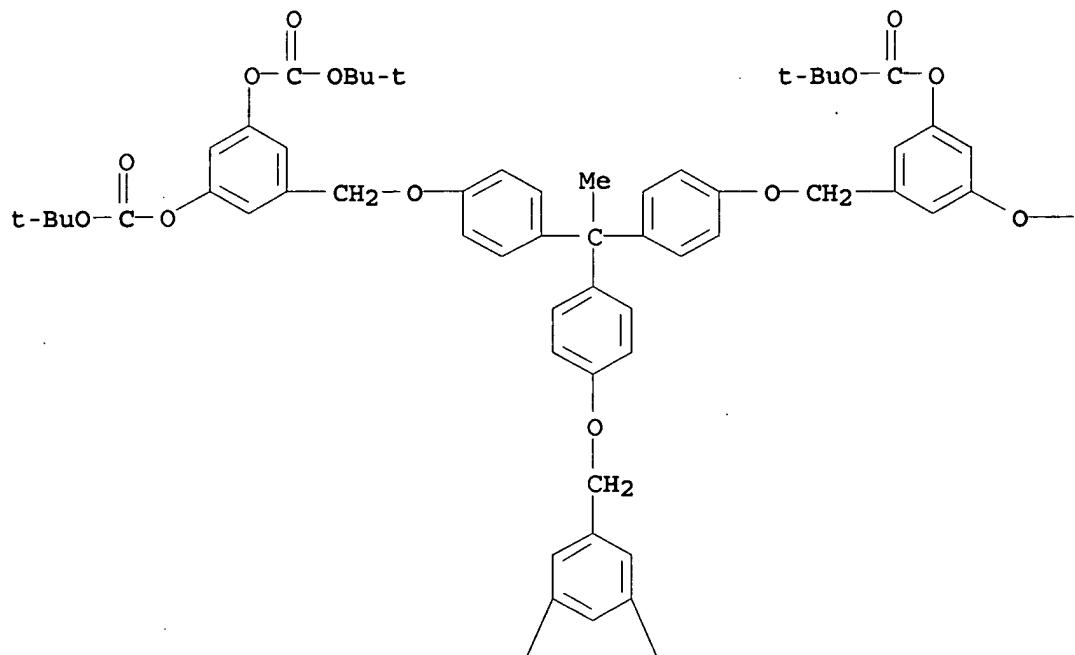
PAGE 2-A



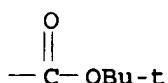
RN 683227-76-1 HCAPLUS

CN Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-5,1,3-benzenetriyl) hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



PAGE 2-A



IC ICM G03F007-039

ICS C07C039-17; C07C069-736; C07D309-04

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)

Section cross-reference(s) : 76

ST photoresist compn

IT Light-sensitive materials

Photoresists

Recrystallization

Semiconductor device fabrication

(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

IT Distillation  
(vacuum; photoresist base material, method for purification thereof, and photoresist compns. containing the same)

IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers  
125748-07-4P, Calix[4]resorcinarene 211427-64-4P 683227-72-7P  
683227-73-8P 683227-74-9P 683227-75-0P  
683227-76-1P

(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions 110-87-2, Dihydro-2H-pyran 623-05-2, 4-Hydroxybenzyl alcohol 1927-95-3, 4-Bromophenyl acetate 5001-18-3, 1,3-Dihydroxyadamantane 5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl dicarbonate 27955-94-8 29654-55-5, 3,5-Dihydroxybenzylalcohol 99181-50-7, 1,3,5-Trihydroxyadamantane

(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

IT 156281-11-7P, 4-(tert-Butoxycarbonyloxy)benzylalcohol  
(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:217149 HCAPLUS

DOCUMENT NUMBER: 140:278193

TITLE: Manufacture of amorphous polyphenols with good heat resistance as electroluminescent substances and hole transporters for organic electroluminescent devices

INVENTOR(S): Fukuoka, Naohiko; Tagami, Sanae; Fujiwara, Toru; Shionoya, Hidehiko

PATENT ASSIGNEE(S): Chemipro Kasei Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 62 pp.

CODEN: JXXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

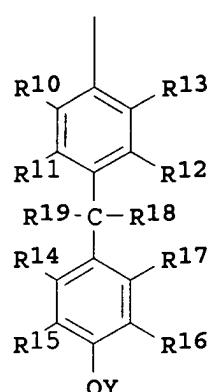
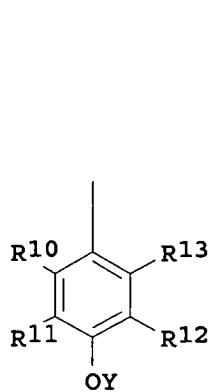
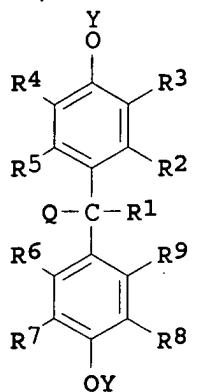
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004083444	A	20040318	JP 2002-244369	20020823
PRIORITY APPLN. INFO.:			JP 2002-244369	20020823

OTHER SOURCE(S): MARPAT 140:278193

ED Entered STN: 18 Mar 2004

GI

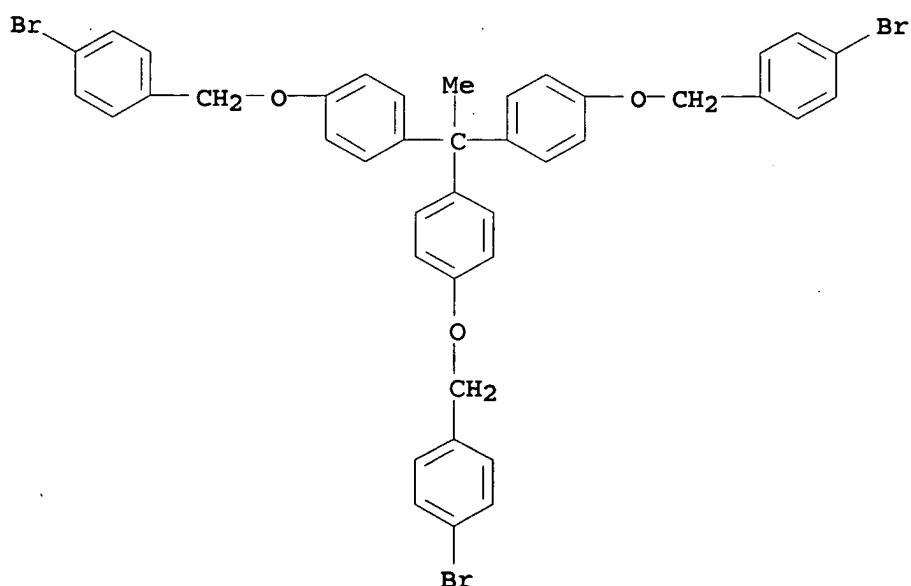


AB The polyphenols I [Q = II, III, etc.; R1, R18, R19 = H, (halo)alkyl, (alkyl)cycloalkyl, etc.; Y =  $\text{CH}_2\text{Ar}_1\text{NAr}_2\text{Ar}_3$ ; R2-R17 = H, halo, (halo)alkyl, etc.; Ar1 = arylene [substituted by halo, (cyclo)alkyl, aralkyl, etc.], Ar2, Ar3 = aryl [substituted by halo, (cyclo)alkyl, aralkyl, etc.]] are manufactured by treatment of I (Q = II, III, etc.; Y = H, R1-R19 = same as above) with  $\text{Ar}_2\text{Ar}_3\text{NAr}_1\text{CH}_2\text{OH}$  (Ar1-Ar3 = same as above), or treatment of I (Q = II, III, etc.; Y =  $\text{CH}_2\text{Ar}_1\text{X}$ ; Ar1 = same as above; X = halo) with  $\text{HNAr}_2\text{Ar}_3$  (Ar2, Ar3 = same as above). Emitter or hole-transporting layers of the devices are effectively manufactured by solution casting of the polyphenols instead of vapor deposition.

IT 672288-94-7P  
(manufacture of amorphous polyphenols as electroluminescent substances  
and hole transporters for organic electroluminescent devices)

RN 672288-94-7 HCABLJS

CN 372288-94-7 ACLEFUS  
CN Benzene, 1,1',1''-ethylidynetris[4-[(4-bromophenyl)methoxy] - (CA INDEX NAME)



IC ICM C07C217-76  
 ICS C07C213-02; C07C213-06; C07D209-86; C09K011-06; H05B033-14;  
 H05B033-22  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 Section cross-reference(s): 25  
 ST amorphous polyphenol manuf org electroluminescent device; hole  
 transport polyphenol org electroluminescent device;  
 methylfuorenylaminobenzyloxyphenyl ethane manuf org electroluminescent  
 device; soln casting polyphenol org electroluminescent device; heat  
 resistance polyphenol org electroluminescent device  
 IT 110726-28-8P 672288-94-7P 672288-95-8P  
 (manufacture of amorphous polyphenols as electroluminescent substances  
 and hole transporters for organic electroluminescent devices)

L61 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:76525 HCAPLUS

DOCUMENT NUMBER: 140:129341

TITLE: Polyimides, polyamic acids, and interlayer  
 insulation films using them with excellent  
 adhesion and heat resistance and low  
 specific inductive capacity

INVENTOR(S): Watanabe, Yasushi; Ueda, Mitsuru

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004026850	A	20040129	JP 2002-152177	20020527
JP 3786051	B2	20060614	<--	
PRIORITY APPLN. INFO.:			JP 2002-132334	A 20020508
			<--	

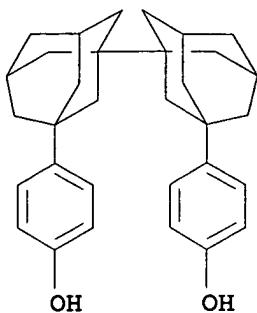
ED Entered STN: 30 Jan 2004

AB Polyamic acids having  $\text{YNHCOX}(\text{CO}_2\text{H})_2\text{CONH}$  unit ( $\text{X} = 4$ -valent cyclic  
 aliphatic group;  $\text{Y} = \text{bivalent aromatic group having adamantane structure}$ ),  
 the corresponding polyimides, and interlayer insulation films made of  
 the polyimides are claimed. Thus, 1,3-bis[4-(4-  
 aminophenoxy)phenyl]adamantane (preparation described) was treated with  
 equimolar 1,2,3,4-cyclobutanetetracarboxylic dianhydride at  $80^\circ$   
 for 23 h in N-methylpyrrolidone to give 89% polyamic acid, which was  
 heated to  $70$ - $300^\circ$  to give a polyimide showing decomposition  
 initiation temperature  $387^\circ$ , 5% weight loss temperature  $464^\circ$ , and sp.  
 inductive capacity 2.78.

IT 16887-35-7P  
 (preparation and reaction with dinitrobenzene)

RN 16887-35-7 HCAPLUS

CN Phenol, 4,4'-(1,1'-bitricyclo[3.3.1.13,7]decane)-3,3'-diylbis- (CA  
 INDEX NAME)



IC ICM C08G073-10  
 ICS H01B003-30  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 24, 25, 76  
 ST aminophenoxyphenyladamantane cyclobutanetetracarboxylic acid polyimide  
 insulation film; heat **resistance** polyimide  
 adamantanephenoxyaniline cyclobutanecarboxylic acid  
 IT Polyethers, properties  
 (polyamic acid-; polyamic acids and polyimides with good heat  
**resistance** and low sp. inductive capacity for interlayer  
 insulation films)  
 IT Dielectric films  
 (polyamic acids and polyimides with good heat **resistance**  
 and low sp. inductive capacity for interlayer insulation films)  
 IT Polyamic acids  
 (polyether-; polyamic acids and polyimides with good heat  
**resistance** and low sp. inductive capacity for interlayer  
 insulation films)  
 IT Polyimides, uses  
 (polyether-; polyamic acids and polyimides with good heat  
**resistance** and low sp. inductive capacity for interlayer  
 insulation films)  
 IT Polyethers, uses  
 (polyimide-; polyamic acids and polyimides with good heat  
**resistance** and low sp. inductive capacity for interlayer  
 insulation films)  
 IT 651024-87-2P 651025-05-7P 651025-18-2P  
 (polyamic acids and polyimides with good heat **resistance**  
 and low sp. inductive capacity for interlayer insulation films)  
 IT 649757-15-3P 649757-16-4P 649757-17-5P 649757-18-6P  
 649757-19-7P 649757-21-1P 649757-22-2P  
 (polyamic acids and polyimides with good heat **resistance**  
 and low sp. inductive capacity for interlayer insulation films)  
 IT 193422-31-0P, 1,3-Bis[4-(4-aminophenoxy)phenyl]adamantane  
 649757-20-0P  
 (polyamic acids and polyimides with good heat **resistance**  
 and low sp. inductive capacity for interlayer insulation films)  
 IT 16887-35-7P  
 (preparation and reaction with dinitrobenzene)

L61 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:76452 HCAPLUS

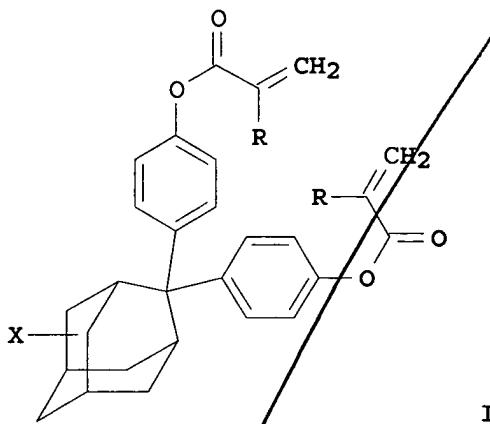
DOCUMENT NUMBER: 140:128813

TITLE: Adamantane acrylate and its production method

INVENTOR(S): Tanaka, Shinji; Yoshidome, Toshihide; Ono, Hidetoshi; Kodoi, Koichi; Hatakeyama, Naoyoshi

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004026700	A	20040129	JP 2002-184203 <-- JP 2002-184203	20020625
PRIORITY APPLN. INFO.:			<--	
ED	Entered STN:	30 Jan 2004		
GI				

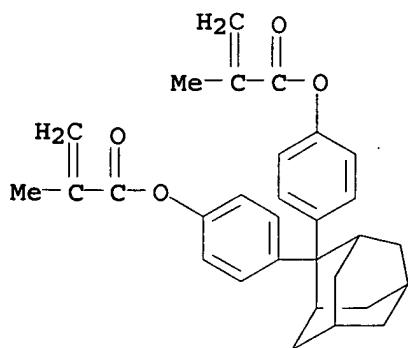


AB The title compds. I (R = hydrogen C1-8 alkyl or fluoroalkyl; X = hydrogen, halogen, alkyl, OH, ether, acid, ester) are prepared from adamantylene diphenols and (meth)acryloyl halides. The compds. are useful as monomers for crosslinkable resins which have good optical properties such as transparency and heat resistance.  
 2,2-Adamantylene (4,1-phenylene)dimethacrylate was prepared from 4,4'-(2,2-adamantylene)diphenol and methacryloyl chloride.

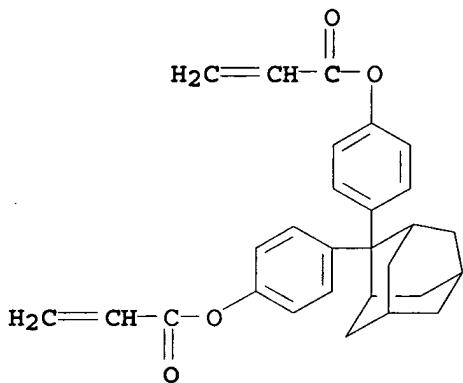
IT 648857-90-3P 648857-91-4P 648857-92-5P  
 (adamantane acrylate and its production method)

RN 648857-90-3 HCPLUS

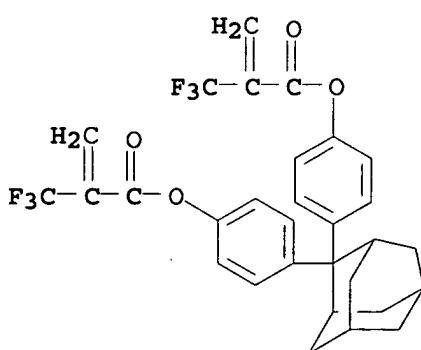
CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.13,7]decylidenedi-4,1-phenylene ester (9CI) (CA INDEX NAME)



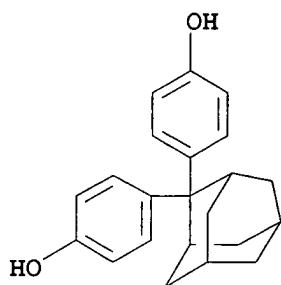
RN 648857-91-4 HCPLUS  
 CN 2-Propenoic acid, tricyclo[3.3.1.13,7]decylidenedi-4,1-phenylene ester  
 (9CI) (CA INDEX NAME)



RN 648857-92-5 HCPLUS  
 CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.13,7]decylidene  
 di-4,1-phenylene ester (9CI) (CA INDEX NAME)



IT 52211-74-2  
 (adamantane acrylate and its production method)  
 RN 52211-74-2 HCPLUS  
 CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



IC ICM C07C069-54  
 ICS C07C067-14; C07B061-00  
 CC 35-2 (Chemistry of Synthetic High Polymers)  
 IT 648857-90-3P 648857-91-4P 648857-92-5P  
     (adamantane acrylate and its production method)  
 IT 920-46-7, Methacrylic acid chloride 52211-74-2  
     (adamantane acrylate and its production method)

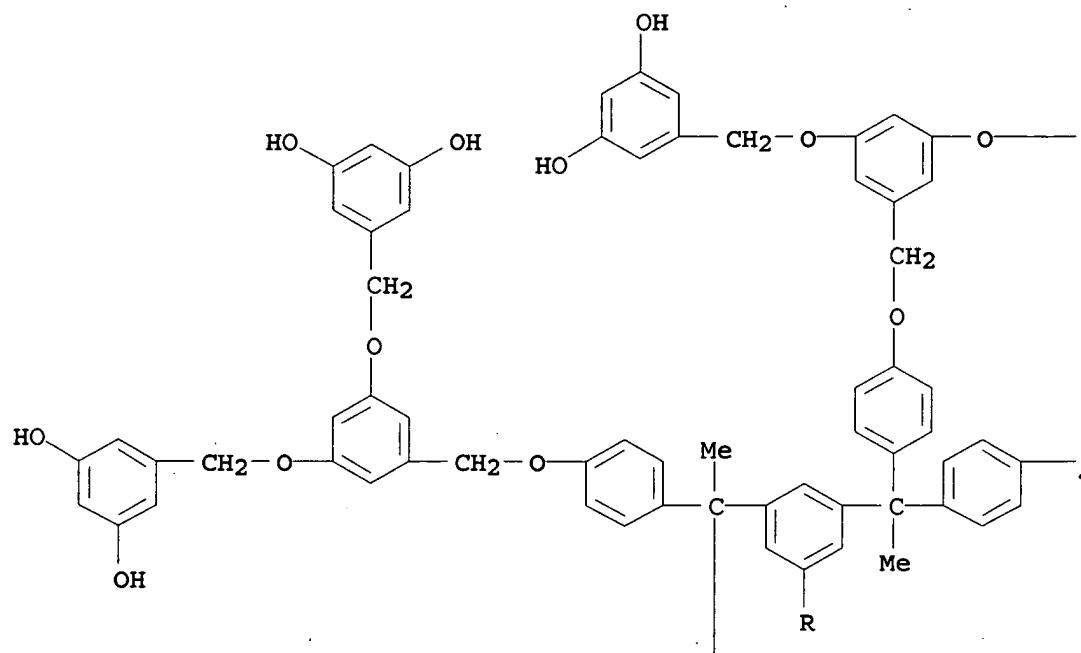
L61 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:18087 HCAPLUS  
 DOCUMENT NUMBER: 140:84635  
 TITLE: Chemically amplified negative **resists**  
       containing alkali-soluble dendrimers and  
       suppressing development defects  
 INVENTOR(S): Adekawa, Yutaka  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

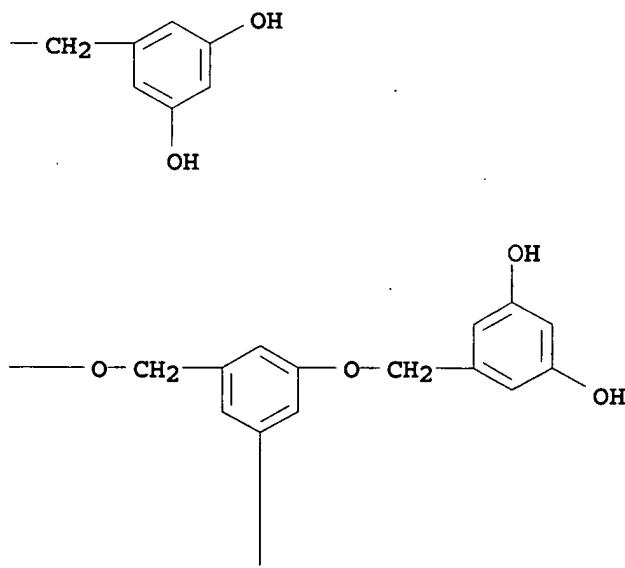
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004004249	A	20040108	JP 2002-159047	20020531
<--				
PRIORITY APPLN. INFO.:			JP 2002-159047	20020531
			<--	

ED Entered STN: 09 Jan 2004  
 AB The **resists**, producing defectless square patterns, comprise  
   (A) dendritic alkali-soluble resins, (B) radiation acid generators, and  
   (C) crosslinking agents forming C-C bonds upon action of acid  
   catalysts. The alkali-soluble resins may be [R1R'1CAC6H2-n(OR2)nR3R4Xm]  
   [R1, R'1 = H, halo, cyano, (halo)alkyl; R2 = H, (cyclo)alkyl, aryl,  
   aralkyl, acyl; R3, R4 = H, halo, cyano, (cyclo)alkyl, alkenyl,  
   aralkyl, aryl; A = single bond, alk(en)ylene, cycloalkylene, arylene,  
   etc.; m = 2, 3; n = 0, 1 (m + n ≤ 3); X = CH2, O, S].  
 IT 640276-98-8P  
     (alkali-soluble binders; chemical amplified neg. **resists** containing  
     alkali-soluble dendritic binder resins forming defect-free square  
     patterns)  
 RN 640276-98-8 HCAPLUS  
 CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''''',5''''''''',5''''''''''',5''''''''''''',5''''''''''''''',5''''''''''''''''',5''''''''''''''''''- [1,3,5-  
   benzenetriyltris[ethylidynebis[4,1-phenyleneoxymethylene-5,1,3-  
   benzenetriylbis(oxymethylene)]]]dodecakis- (9CI) (CA INDEX NAME)

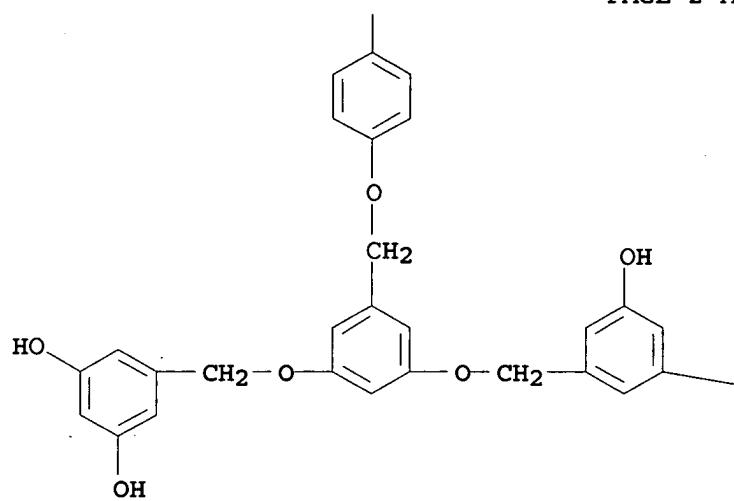
PAGE 1-A



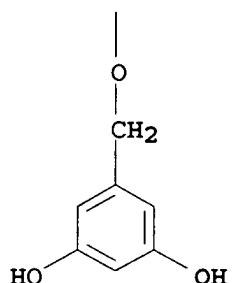
PAGE 1-B



PAGE 2-A



PAGE 2-B

 $\text{OH}$

PAGE 3-A

PAGE 3-B

—OH

IC ICM G03F007-038  
ICS C08G065-34; H01L021-027; H01L021-30  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25  
ST amplified neg resist dendritic polyether binder; development defect prevention neg electron beam resist  
IT Crosslinking agents  
    (chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)  
IT Electron beam resists  
    (neg.-working; chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)  
IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate  
258341-98-9P, Di(4-tert-amylphenyl)iodonium pentafluorobenzenesulfonate 270564-02-8P, Tetramethylammonium pentafluorobenzenesulfonate  
    (acid generators; chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)  
IT 640276-95-5P 640276-96-6P 640276-97-7P 640276-98-8P  
    (alkali-soluble binders; chemical amplified neg. resists containing

alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 640276-94-4P  
(chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 2150-44-9, Methyl 3,5-dihydroxybenzoate 110726-28-8, Trisp PA 182250-70-0  
(chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P 185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P 197087-74-4P  
(crosslinking agents; chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)

L61 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:889841 HCAPLUS

DOCUMENT NUMBER: 139:365992

TITLE: Alicyclic copolymers having low refractive index for optical transmission fibers and their preparation

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

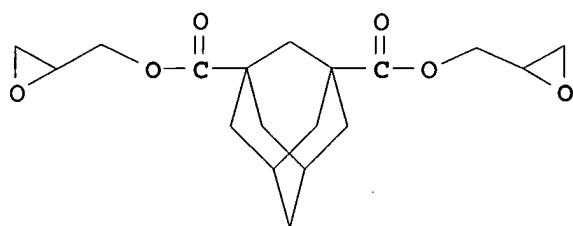
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

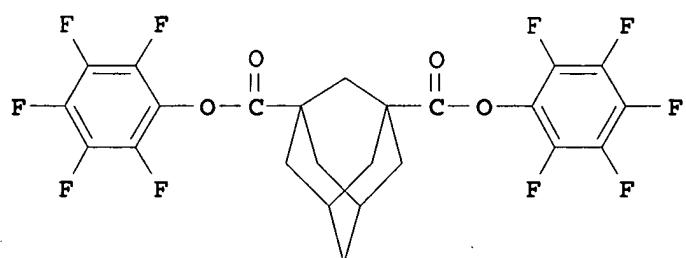
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003321530	A	20031114	JP 2002-129734 <--	20020501
JP 3889990	B2	20070307	JP 2002-129734 <--	20020501

PRIORITY APPLN. INFO.:

ED Entered STN: 14 Nov 2003  
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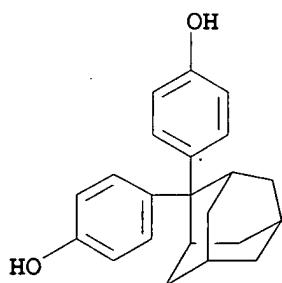
II

AB Copolymers (of Mn 2,000-300,000) prepared by polycondensation of alicyclic diepoxides Cy(CO<sub>2</sub>G)<sub>2</sub> and/or Cy(R<sub>1</sub>O<sub>2</sub>G)<sub>2</sub> and Cy(CO<sub>2</sub>R<sub>2</sub>)<sub>2</sub> and/or Cy(R<sub>1</sub>O<sub>2</sub>H)<sub>2</sub> [Cy = C<sub>3</sub>-10 bivalent alicyclic hydrocarbon; R<sub>1</sub> = C<sub>6</sub>-12 (fluoro)arylene; R<sub>2</sub> = H, C<sub>1</sub>-5 (fluoro)alkyl, (fluoro)phenyl; G = glycidyl], and resins for optical transmission fibers containing the copolymers are sep. claimed. The polycondensation may be carried out in the presence of quaternary onium salts, tertiary amines, and/or tertiary phosphines. Thus, equimolar I was copolymerd. with II in the presence of Bu<sub>4</sub>PCl and recrystd. to give a polymer of Mn 12,700 and polydispersity 2.53.

IT 52211-74-2P 56323-07-0P 620990-08-1P  
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

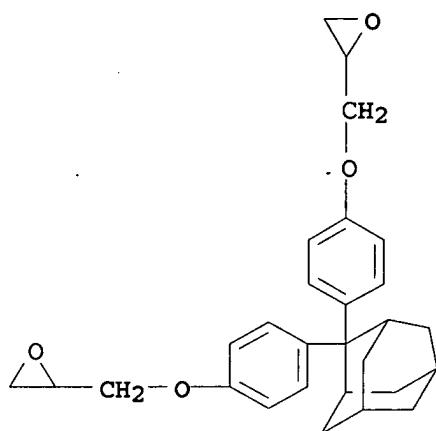
RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)

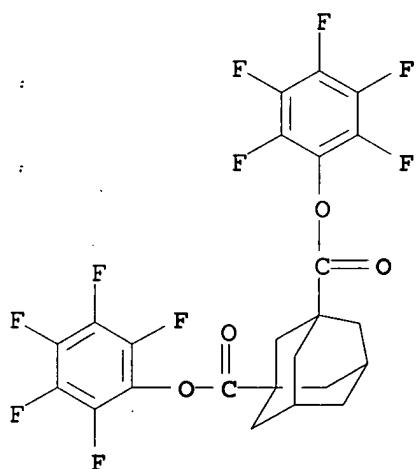


RN 56323-07-0 HCAPLUS

CN Oxirane, 2,2'-(tricyclo[3.3.1.13,7]decylidenebis(4,1-phenyleneoxymethylene))bis- (CA INDEX NAME)



RN 620990-08-1 HCAPLUS

CN Tricyclo[3.3.1.13,7]decane-1,3-dicarboxylic acid,  
bis(pentafluorophenyl) ester (9CI) (CA INDEX NAME)

IC ICM C08G059-24

ICS C08G059-42; C08G059-62; G02B001-04; G02B006-00; G02B006-12

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

IT Optical fibers

Polymerization catalysts

(heat-resistant low-n adamantylene-containing copolymers for  
optical transmission fibers)

IT Polyethers, uses

(polyester-, cardo, fluorine-containing; heat-resistant low-n  
adamantylene-containing copolymers for optical transmission fibers)

IT Polyethers, uses

(polyester-, fluorine-containing; heat-resistant low-n  
adamantylene-containing copolymers for optical transmission fibers)

IT Fluoropolymers, uses

(polyester-polyether-, heat-resistant low-n

adamantylene-containing copolymers for optical transmission fibers)

IT Cardo polymers

(polyester-polyethers, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT Polyesters, uses  
(polyether-, cardo, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT Polyesters, uses  
(polyether-, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT Onium compounds  
(quaternary, polymerization catalysts; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT Amines, uses  
Phosphines  
(tertiary, polymerization catalysts; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT 1112-67-0, Tetrabutylammonium chloride 1643-19-2, Tetrabutylammonium bromide 2001-45-8, Tetraphenylphosphonium chloride 2304-30-5, Tetrabutylphosphonium chloride 2751-90-8, Tetraphenylphosphonium bromide 3115-68-2, Tetrabutylphosphonium bromide  
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT 37677-93-3P, 1,3-Bis(4-hydroxyphenyl)adamantane 52211-74-2P  
56323-07-0P 252554-10-2P 620990-07-0P 620990-08-1P  
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT 620990-09-2P 620990-10-5P 620990-11-6P 620990-12-7P  
620990-13-8P 620990-14-9P 620990-15-0P  
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

IT 108-95-2, Phenol, reactions 700-58-3, 2-Adamantanone 771-61-9, Pentafluorophenol 876-53-9, 1,3-Dibromoadamantane 3132-64-7, Epibromohydrin 39269-10-8, 1,3-Adamantanedicarboxylic acid  
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

L61 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:652128 HCAPLUS  
DOCUMENT NUMBER: 139:198228  
TITLE: Hydroxyphenyl adamantanes, and their production, for heat-resistant resins  
INVENTOR(S): Furukawa, Akira; Egawa, Kenji; Watanabe, Kentaro; Yao, Kazuhiko; Ishitani, Miwa  
PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 21 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

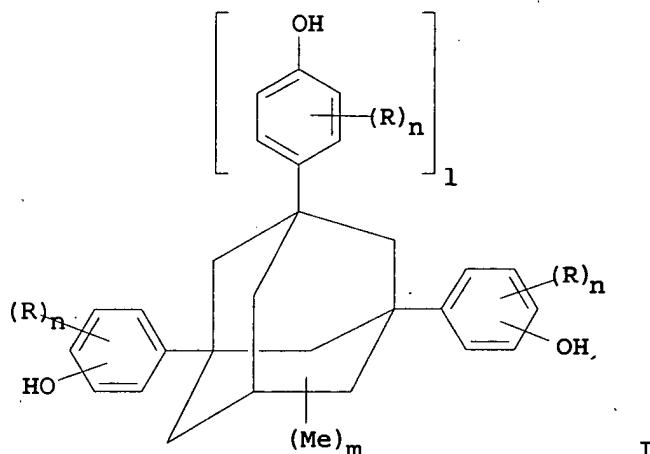
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1336597	A1	20030820	EP 2003-3477	20030214
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2003306460	A	20031028	JP 2002-376246	20021226
			<--	
JP 2003306461	A	20031028	JP 2003-4245	20030110

US 2003187307	A1	20031002	US 2003-361484	20030207
US 6720460	B2	20040413	<--	
PRIORITY APPLN. INFO.:			JP 2002-38190	A 20020215
			<--	
			JP 2002-38192	A 20020215
			<--	
			JP 2002-376246	A 20021226
			<--	
			JP 2003-4245	A 20030110
			<--	

OTHER SOURCE(S) : MARPAT 139:198228

ED Entered STN: 21 Aug 2003

GI

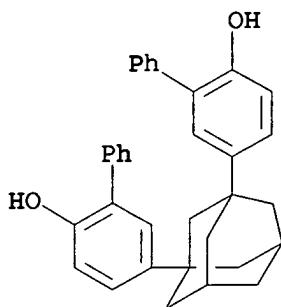


AB Hydroxyphenyl adamantanes have structure I, where R = alkyl, cycloalkyl or Ph group; m = 0 or 1 or 2; l = 0 or 1; provided when l = 1, hydroxy groups of substituted hydroxyphenyl groups at positions 1 and 3 are together in para-position; n = 0 or 1, 2 or 3; and when l = 0, n = 1, 2 or 3. Thus, the reaction of 8.39 mol 2,6-dimethylphenol with 1.05 mol 1,3-adamantane-diol in the presence of p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H monohydrate at 90° gave crude 1,3-Bis(3,5-dimethyl-4-hydroxyphenyl)adamantane (recryst. m.p. 189°).

IT 582311-11-3P 582311-18-0P  
(in manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

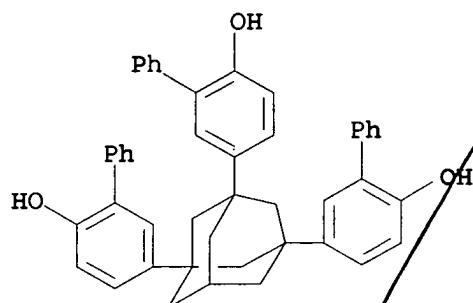
RN 582311-11-3 HCPLUS

CN [1,1'-Biphenyl]-2-ol, 5,5''-tricyclo[3.3.1.13,7]decane-1,3-diylbis-(9CI) (CA INDEX NAME)



RN 582311-18-0 HCPLUS

CN [1,1'-Biphenyl]-2-ol, 5,5',5'''-tricyclo[3.3.1.13,7]decane-1,3,5-triyltris- (9CI) (CA INDEX NAME)

IC ICM C07C039-17  
IC S C07C037-16

CC 37-2 (Plastics Manufacture and Processing)

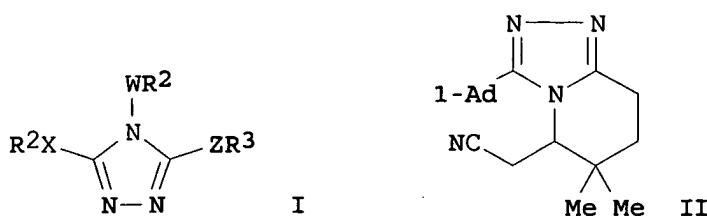
Section cross-reference(s): 25

ST hydroxyphenyl adamantane bisphenol trisphenol prep; heat  
resistant resin hydroxyphenyl adamantane monomerIT Heat-resistant materials  
(manufacture of hydroxyphenyl adamantane precursor for heat-  
resistant resins)IT 566885-10-7P 582311-10-2P 582311-11-3P 582311-12-4P  
582311-13-5P 582311-14-6P 582311-15-7P 582311-16-8P  
582311-17-9P 582311-18-0P(in manufacture of hydroxyphenyl adamantane precursor for heat-  
resistant resins)IT 90-43-7, o-Phenylphenol 95-48-7, 2-Methylphenol, reactions  
108-39-4, 3-Methylphenol, reactions 108-95-2, Phenol, reactions  
119-42-6, o-Cyclohexylphenol 576-26-1, 2,6-Dimethylphenol  
1596-13-0, 2-Cyclohexyl-5-methylphenol  
(reaction with adamantane bisphenol or trisphenol; in manufacture of  
hydroxyphenyl adamantane precursor for heat-resistant  
resins)IT 5001-18-3, 1,3-Adamantanediol 99181-50-7, 1,3,5-Adamantanetriol  
(reaction with substituted phenol; in manufacture of hydroxyphenyl  
adamantane precursor for heat-resistant resins)REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L61 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:633402 HCAPLUS  
 DOCUMENT NUMBER: 139:180065  
 TITLE: Preparation of 1,2,4-triazole derivatives as  
 11 $\beta$ -hydroxysteroid dehydrogenase 1 inhibitors  
 useful for the treatment of diabetes, obesity and  
 dyslipidemia  
 INVENTOR(S): Balkovec, James M.; Thieringer, Rolf; Mundt,  
 Steven S.; Hermanowski-Vosatka, Anne; Graham,  
 Donald W.; Patel, Gool F.; Aster, Susan D.;  
 Waddell, Sherman T.; Olson, Steven H.; Maletic,  
 Milana  
 PATENT ASSIGNEE(S): Merck & Co., Inc., USA  
 SOURCE: PCT Int. Appl., 119 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003065983	A2	20030814	WO 2003-US2558	20030128 <--
WO 2003065983	A3	20031127		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2474168	A1	20030814	CA 2003-2474168	20030128 <--
AU 2003207717	A1	20030902	AU 2003-207717	20030128 <--
EP 1474139	A2	20041110	EP 2003-705952	20030128 <--
EP 1474139	B1	20071121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005525326	T	20050825	JP 2003-565409	20030128 <--
US 2005070720	A1	20050331	US 2004-502967	20040729 <--
PRIORITY APPLN. INFO.:			US 2002-353592P	P 20020201 <--
			WO 2003-US2558	W 20030128 <--

OTHER SOURCE(S): MARPAT 139:180065  
 ED Entered STN: 15 Aug 2003  
 GI

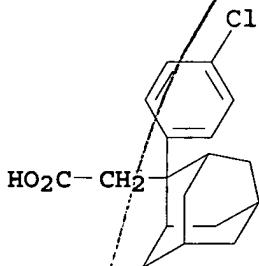


AB Triazoles I [R1 = (un)substituted adamantyl; W = (un)substituted NH, bond; X = CH2, bond; Z = S, bond; R2 = H, (un)substituted alkyl, alkenyl, CH2CO2H, cycloalkyl, bicycloalkyl, adamantyl; R3 = H, (un)substituted alkyl, alkenyl] were prepared. They inhibit the 11 $\beta$ -HSD1-mediated conversion of cortisone and other 11-keto-glucocorticoids to cortisol and other 11 $\beta$ -hydroxy-glucocorticoids (no data). The 11 $\beta$ -HSD1 inhibitors therefore decrease the amount of cortisol in target tissues, thereby modulating the effects of cortisol. Modulation of cortisol may be effective in controlling non-insulin-dependent diabetes (NIDDM), hyperglycemia, obesity, insulin **resistance**, dyslipidemia, hyperlipidemia, hypertension, Syndrome X, and other symptoms associated with NIDDM or with excess cortisol in the body. Thus, the triazole II was prepared by treating 1-adamantanecarbonylhydrazine with 2-methoxy-5,5-dimethyl-3,4,5,6-tetrahydropyridine-6-acetonitrile.

IT 400081-88-1  
(preparation of 1,2,4-triazole derivs. as 11 $\beta$ -hydroxysteroid dehydrogenase 1 inhibitors)

RN 400081-88-1 HCAPLUS

CN Tricyclo[3.3.1.13,7]decane-2-acetic acid, 2-(4-chlorophenyl)- (CA INDEX NAME)



IC ICM A61K

CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

IT 75-36-5, Acetyl chloride 79-03-8, Propionyl chloride 98-88-4, Benzoyl chloride 110-58-7, 1-Aminopentane 111-26-2, 1-Aminohexane 141-75-3, Butyryl chloride 638-29-9, Valeryl chloride 700-57-2, 2-Adamantanone 753-90-2, 2,2,2-Trifluoroethylamine 765-30-0, Cyclopropylamine 878-13-7, Cycloundecanone 941-37-7, 1-Bromo-3,5-dimethyladamantane 1196-38-9 1453-50-5, N-Cyclopropylcyclopropanecarboxamide 1502-06-3, Cyclodecanone 1889-06-1 2094-72-6, 1-Adamantanecarbonyl chloride 2094-73-7, Ethyl 1-adamantanecarboxylate 2525-16-8, 1-Aza-2-methoxy-1-cycloheptene 3350-30-9, Cyclononanone 3768-43-2 4238-69-1

4775-98-8 4942-47-6, 1-Adamantaneacetic acid 5351-69-9,  
 4-Phenylthiourethane 7149-39-5 13431-36-2 15291-66-4,  
 3,5,7-Trimethyladamantane-1-carboxylic acid 18761-61-0 19026-80-3  
 19748-88-0 21816-08-0, 3-Bromo-1-adamantanecarboxylic acid  
 22245-95-0 24056-65-3 32741-89-2 32806-53-4 39094-32-1  
 41216-03-9 41216-04-0 41419-25-4 42711-75-1,  
 3-Hydroxyadamantane-1-carboxylic acid 50549-20-7 51551-56-5  
 55186-89-5 65113-02-2 71058-32-7 81976-72-9 81976-73-0  
 83090-60-2 87922-77-8 87922-78-9 96860-19-4 120484-70-0  
 139158-24-0 139158-25-1 139158-26-2 146059-76-9 151017-99-1  
 151672-39-8 179686-06-7 195073-93-9 201992-25-8 256954-82-2  
**400081-88-1** 412027-54-4 581787-32-8 581787-33-9  
 581787-34-0 581787-35-1 581787-36-2 581787-37-3 581787-38-4  
 581787-39-5 581787-40-8  
 (preparation of 1,2,4-triazole derivs. as 11 $\beta$ -hydroxysteroid  
 dehydrogenase 1 inhibitors)

L61 ANSWER 11 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:137289 HCPLUS

DOCUMENT NUMBER: 139:14797

TITLE: Synthesis of novel thermally reversible  
 photochromic spiro[adamantane-2,7'-(6'H)-  
 benzothiophene]

AUTHOR(S): Yokoyama, Yasushi; Nagashima, Hitoshi; Shrestha,  
 Sujen Man; Yokoyama, Yayoi; Takada, Kensaku

CORPORATE SOURCE: Dep. Advanced Materials Chem., Graduate School  
 Engineering, Yokohama Natl. Univ., Yokohama,  
 240-8501, Japan

SOURCE: Bulletin of the Chemical Society of Japan (2003), 76(2), 355-361

CODEN: BCSJA8; ISSN: 0009-2673

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

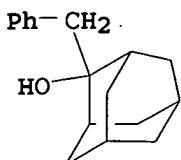
ED Entered STN: 24 Feb 2003

AB A new thermally reversible photochromic compound, 4',5'-hexafluoropropano-6'-phenylspiro[adamantane-2,7'-(6'H)-benzothiophene], derived from UV-irradiation of 2-(1-adamantylidene-1-phenylmethyl)-3,3,4,4,5,5-hexafluoro-1-(3-thienyl)cyclopentene via the photochem. 6 $\pi$ -electrocyclization followed by the thermal 1,5-hydrogen migration, was synthesized and its photochem. and thermal properties were examined. The structurally more simplified 3,3,4,4,5,5-hexafluoro-2-(2-methyl-1-phenyl-1-propenyl)-1-(3-thienyl)cyclopentene did not yield the thermally reversible photochromic compound upon UV irradiation

IT 52889-89-1P, 2-Benzyl-2-adamantanone  
 (in synthesis of (adamantylidenephenylmethyl)hexafluoro(thienyl)cyclopentene)

RN 52889-89-1 HCPLUS

CN Tricyclo[3.3.1.13,7]decan-2-ol, 2-(phenylmethyl)- (9CI) (CA INDEX  
 NAME)

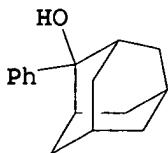


CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 27  
 IT 52889-89-1P, 2-Benzyl-2-adamantanone 535932-20-8P  
 (in synthesis of (adamantylidenephenylmethyl)hexafluoro(thienyl)cyclopentene)  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 12 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:36430 HCPLUS  
 DOCUMENT NUMBER: 138:106431  
 TITLE: Process for preparation of lithium adamantylates, adamantanols, and adamantyl esters  
 INVENTOR(S): Kikukawa, Tadashi; Murai, Yoshihiro; Kaimasu, Taketoshi  
 PATENT ASSIGNEE(S): Chemical Soft Kaihatsu Kenkyusho Y. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003012579	A	20030115	JP 2001-195705	20010628 <--
PRIORITY APPLN. INFO.:			JP 2001-195705	20010628 <--

OTHER SOURCE(S): MARPAT 138:106431  
 ED Entered STN: 16 Jan 2003  
 AB This invention pertains to prep of CR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>OLi, CR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>OH, and CR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>OCOR<sub>4</sub> [wherein R<sub>1</sub> and R<sub>2</sub> = independently H, alkyl, or aryl; or R<sub>1</sub> and R<sub>2</sub> together form a ring with the carbon atom attached; R<sub>3</sub> = (cyclo)alkyl, alkenyl, or aryl; R<sub>4</sub> = H, alkyl, alkenyl, or aryl] comprising reaction of ketone R<sub>1</sub>R<sub>2</sub>CO and lithium, followed by the addition of R<sub>3</sub>-halo. For example, 2-adamantanone was treated with lithium in THF, followed by the addition of Et bromide to afford 2-ethyl-2-adamantanone (65%). This method avoids the use of dangerous alkylolithium and low b.p. solvents to provide lithium alkoxides safely in high yields. Adamantyl esters can be used as resist materials in industry (no data).  
 IT 29480-18-0P  
 (preparation of lithium adamantylates, adamantanols, and adamantyl esters)  
 RN 29480-18-0 HCPLUS  
 CN Tricyclo[3.3.1.13,7]decan-2-ol, 2-phenyl- (CA INDEX NAME)



IC ICM C07C029-38  
 ICS C07C035-23; C07C035-27; C07C035-29; C07C035-37; C07C035-46;  
 C07C067-14; C07C069-54  
 CC 23-7 (Aliphatic Compounds)  
 IT 14451-85-5P 14451-86-6P 14648-57-8P 14648-58-9P  
 29480-18-0P 38424-20-3P 38432-77-8P 53082-16-9P  
 78829-26-2P 209982-56-9P 485804-65-7P 485804-66-8P  
 (preparation of lithium adamantylates, adamantanols, and adamantyl  
 esters)

L61 ANSWER 13 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:900853 HCPLUS

DOCUMENT NUMBER: 138:18048

TITLE: Polymers for photoresists,  
 photosensitive compositions containing them,  
 manufacture of semiconductors, and (meth)acrylic  
 acid esters

INVENTOR(S): Tsutsumi, Kiyoharu; Inoue, Keizo; Funaki,  
 Katsunori; Nakano, Tatsuya; Horai, Akira

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 98 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

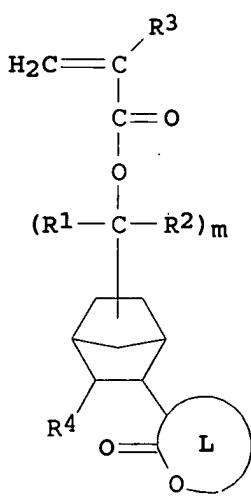
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002338627	A	20021127	JP 2001-153173	20010522
PRIORITY APPLN. INFO.:				<--
JP 2001-153173				20010522
<--				

OTHER SOURCE(S): MARPAT 138:18048

ED Entered STN: 27 Nov 2002

GI



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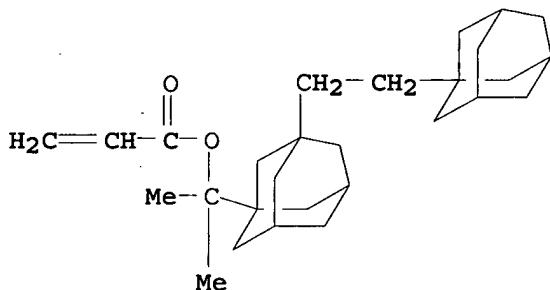
AB The polymers contain  $\geq 1$  monomer units derived from (meth)acrylic acid esters  $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CR}_1\text{R}_2)\text{mXC}(:\text{O})(\text{CH}_2)\text{nY}$ ,  $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1(\text{CH}_2)\text{n}_2\text{Y}_2(\text{CH}_2)\text{n}_1\text{Y}_1$ ,  $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1\text{R}_2(\text{CH}_2)\text{nY}$ ,  $\text{CH}_2:\text{CRaC}(:\text{O})\text{OXCH}[(\text{CH}_2)\text{mCO}_2\text{R}_3]\text{CO}_2\text{R}_3$ , I,  $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CH}_2)\text{nXAY}$ , and  $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1\text{R}_2\text{XAY}$  [Ra = H, Me; R1, R2 = H, C1-5 hydrocarbyl; R3 = (un)substituted tertiary hydrocarbyl, tetrahydropyranyl, tetrahydrofuran; R4 = H, C1-20 hydrocarbyl, (protected) OH or  $\text{CH}_2\text{OH}$ ; A = single bond, methylene, (hydroxy)ethylene; L = (un)substituted  $\geq 5$ -membered lactone; X = (un)substituted alicyclic group; Y, Y1, Y2 = (un)substituted alicyclic group; m = 0, 1; n, n1, n2 = 0-2]. Semiconductors are manufactured by (1) applying the photosensitive compns. containing the polymers and photoacid generators on substrates, (2) exposing the resulting films, and (3) developing to give patterns. The compns. show good etching resistance, high resolution, and good transparency.

IT 477520-79-9P

(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)

RN 477520-79-9 HCPLUS

CN 2-Propenoic acid, 1-methyl-1-[3-(2-tricyclo[3.3.1.13,7]dec-1-ylethyl)tricyclo[3.3.1.13,7]dec-1-yl]ethyl ester (CA INDEX NAME)



IC ICM C08F020-28

ICS C08F020-18; C08F220-18; C08F220-28; C08F222-06; C08F232-08; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST alicyclic acrylate polymer etching resistance photoresist; methacrylate alicyclic polymer etching resistance photoresist; semiconductor manuf alicyclic acrylate polymer photoresist; adamantane acrylate polymer etching resistance photoresist; norbornene acrylate polymer etching resistance photoresist

IT Photoresists

Semiconductor device fabrication

(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)

IT 477520-65-3P 477520-67-5P 477520-69-7P 477520-71-1P

477520-73-3P 477520-76-6P 477520-77-7P 477520-78-8P

477520-79-9P 477520-80-2P 477520-81-3P 477520-82-4P

477520-83-5P 477539-82-5P 477539-84-7P 477539-86-9P

477539-87-0P 477539-88-1P 477539-90-5P 477539-91-6P

477539-93-8P 477539-94-9P 477539-95-0P 477539-96-1P

477539-97-2P 477539-98-3P 477539-99-4P 477540-00-4P

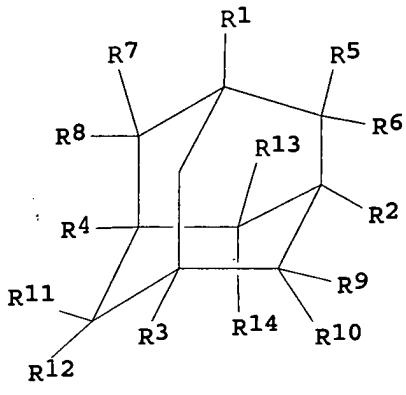
477540-01-5P	477540-02-6P	477540-03-7P	477540-04-8P
477540-05-9P	477540-06-0P	477540-07-1P	477540-08-2P
477540-09-3P	(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)		
IT 477520-84-6P	477520-86-8P	477520-88-0P	477520-90-4P
477520-92-6P	477520-94-8P	477520-97-1P	477520-98-2P
477520-99-3P	477521-01-0P	477521-02-1P	477521-04-3P
477521-06-5P	477521-08-7P	477521-10-1P	477521-12-3P
477521-14-5P	477521-16-7P	477521-18-9P	477521-20-3P
477521-22-5P	477521-24-7P	477521-26-9P	477521-28-1P
477521-30-5P	477521-32-7P	477521-34-9P	477521-36-1P
477540-11-7P	477540-13-9P	477540-15-1P	477540-17-3P
477540-19-5P	477540-21-9P	477540-23-1P	477540-25-3P
477540-27-5P	477540-29-7P	477540-31-1P	477540-33-3P
477540-35-5P	477540-37-7P	477540-39-9P	477540-42-4P
477540-44-6P	477540-46-8P	477540-48-0P	477540-50-4P
477540-52-6P	477540-54-8P	477541-51-8P	477579-37-6P
477579-38-7P	477579-39-8P	477579-40-1P	
(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)			
IT 33624-09-8P	113249-47-1P	423166-29-4P	477520-64-2P
477520-66-4P	477520-68-6P	477520-70-0P	477520-72-2P
477520-74-4P	477520-75-5P	477539-81-4P	477539-83-6P
477539-85-8P	477539-89-2P	477539-92-7P	
(intermediates in preparation of monomers; etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)			
IT 75-07-0, Acetaldehyde, reactions 96-48-0, $\gamma$ -Butyrolactone 121-46-0, Norbornadiene 281-23-2, Adamantane 498-66-8, 2-Norbornene 541-16-2, Tert-Butyl malonate 700-58-3, 2-Oxoadamantane 702-98-7, 2-Methyl-2-adamantanone 768-95-6, 1-Adamantanone 775-64-4 814-68-6, Acrylic acid chloride 920-46-7, Methacrylic acid chloride 2146-39-6, 2-Vinylnorbornane 5063-03-6, 5-Acetyl-2-norbornene 5453-80-5, 2-Norbornene-5-carboxaldehyde 5963-26-8 6600-42-6, 1-Vinyladamantane 13080-90-5, Bicyclo[2.2.1]hept-5-en-2-ol 17610-50-3 19396-83-9, Norbornane-2-carbaldehyde 21898-84-0, 4-Oxatricyclo[4.3.1.13,8]undecan-5-one 22497-08-1 45022-27-3, tert-Butyl maleate 85718-44-1 420120-31-6			
(reactants in preparation of monomers; etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)			
IT 477520-96-0P	(undetecting-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)		

L61 ANSWER 14 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:728858 HCPLUS  
 DOCUMENT NUMBER: 137:255082  
 TITLE: Heat-resistant low-crystallinity adamantanone derivative and its use for organic electroluminescent device with high luminescent efficiency and long service life  
 INVENTOR(S): Takeuchi, Hisato; Tanaka, Hiromitsu; Mouri, Makoto; Mori, Tomohiko; Kojima, Kazushige  
 PATENT ASSIGNEE(S): Toyota Central Research and Development Laboratories, Inc., Japan; Denso Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002275103	A	20020925	JP 2001-81434	20010321
PRIORITY APPLN. INFO.:				JP 2001-81434
				20010321
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OTHER SOURCE(S): MARPAT 137:255082  
 ED Entered STN: 25 Sep 2002  
 GI



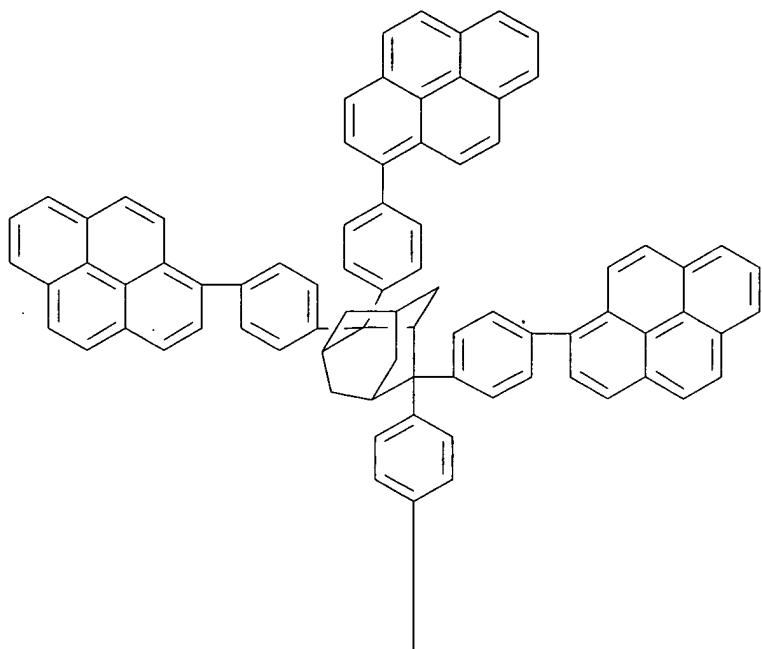
AB Title derivative is expressed by a general formula I ( $\geq 3$  of R1-R14 = functional units having hole-transporting, luminous, or electron-transporting properties). The electroluminescent device has  $\geq 1$  layer containing the adamantane derivative between electrodes. Thus, an electroluminescent device containing tetraphenylen-substituted adamantane as an electroluminescent layer and NPD as a hole-transporting layer emitted blue light with luminance 350 cd/m<sup>2</sup> at 10 mA/cm<sup>2</sup>.

IT 460991-22-4P 460991-25-7P  
 (preparation of adamantane derivative for organic electroluminescent device with high luminescent efficiency and long service life)

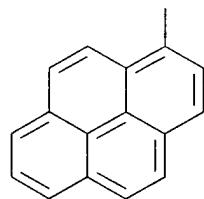
RN 460991-22-4 HCAPLUS

CN Pyrene, 1,1',1'',1'''-(tricyclo[3.3.1.13,7]decane-2,4-diylidene)tetra-4,1-phenylene)tetraakis- (9CI) (CA INDEX NAME)

PAGE 1-A

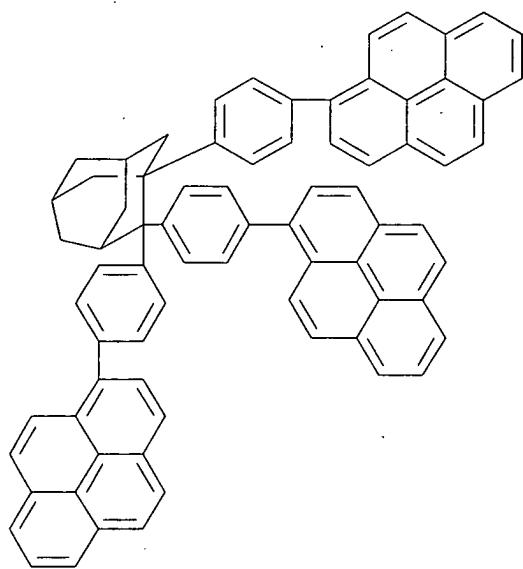


PAGE 2-A



RN 460991-25-7 HCPLUS

CN Pyrene, 1,1',1'''-(tricyclo[3.3.1.13,7]dec-1-yl-2-ylidenetri-4,1-phenylene)tris- (9CI) (CA INDEX NAME)

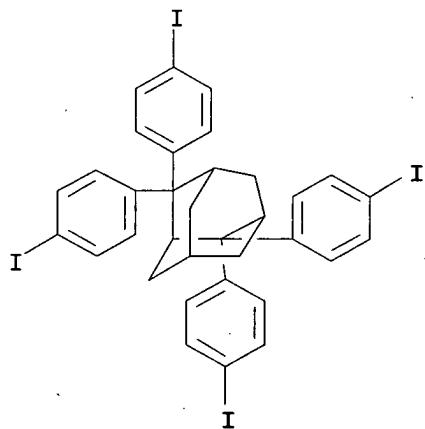


IT 460991-21-3P 460991-24-6P

(preparation of adamantane derivative for organic electroluminescent device with high luminescent efficiency and long service life)

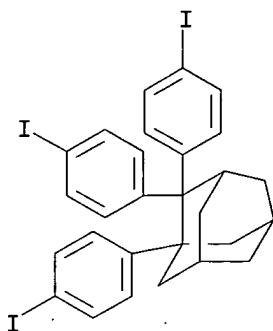
RN 460991-21-3 HCPLUS

CN Tricyclo[3.3.1.13,7]decane, 2,2,4,4-tetrakis(4-iodophenyl)- (CA INDEX NAME)



RN 460991-24-6 HCPLUS

CN Tricyclo[3.3.1.13,7]decane, 1,2,2-tris(4-iodophenyl)- (CA INDEX NAME)

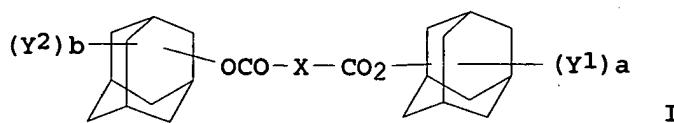


IC ICM C07C013-68  
 ICS C07C025-22; C07C211-50; C09K011-06; H05B033-14; H05B033-22  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s) : 24  
 IT 460991-22-4P 460991-25-7P  
 (preparation of adamantine derivative for organic electroluminescent device with high luminescent efficiency and long service life)  
 IT 460991-20-2P 460991-21-3P 460991-23-5P  
 460991-24-6P  
 (preparation of adamantine derivative for organic electroluminescent device with high luminescent efficiency and long service life)

L61 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:192020 HCAPLUS  
 DOCUMENT NUMBER: 134:237239  
 TITLE: Preparation of dicarboxylic acid diadamantyl esters  
 INVENTOR(S): Suzuki, Shintaro  
 PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001072645	A	20010321	JP 1999-252149	19990906
PRIORITY APPLN. INFO.:				19990906

OTHER SOURCE(S): MARPAT 134:237239  
 ED Entered STN: 21 Mar 2001  
 GI

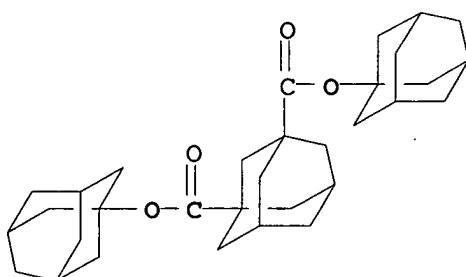


AB Title compds. I (X = C1-20 chain hydrocarbylene, C3-12 alicyclic hydrocarbylene, C6-12 polycyclic hydrocarbylene; Y1, Y2 = H, halo, OH, C1-8 alkyl, C1-8 alkoxy, CO<sub>2</sub>H, CO<sub>2</sub>R; R = C1-8 alkyl; a, b = 1-3), useful as heat- and water-resistant optical or coating materials (no data), are prepared 1-Adamantanone (15.2 g) was esterified with 5.9 g succinic acid in n-octane in the presence of H<sub>2</sub>SO<sub>4</sub> under reflux for 4 h to give 19.3 g diadamantyl succinate.

IT 329900-54-1P  
(preparation of dicarboxylic acid diadamantyl esters)

RN 329900-54-1 HCPLUS

CN Tricyclo[3.3.1.13,7]decane-1,3-dicarboxylic acid, bis(tricyclo[3.3.1.13,7]dec-1-yl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-34

ICS C07C069-74; C07C069-753

CC 24-8 (Alicyclic Compounds)

Section cross-reference(s): 42, 73

IT Coating materials

(heat- and water-resistant; preparation of dicarboxylic acid diadamantyl esters for)

IT 329900-53-0P 329900-54-1P

(preparation of dicarboxylic acid diadamantyl esters)

L61 ANSWER 16 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:806430 HCPLUS

DOCUMENT NUMBER: 134:214835

TITLE: Dendrimer-based chemically amplified resists for sub-100-nm lithography

AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet, Jean M. J.

CORPORATE SOURCE: Dep. Chem., Univ. of California, Berkeley, CA, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2000), 3999(Pt. 2, Advances in Resist Technology and Processing XVII), 1202-1206

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Nov 2000

AB Several new poly(benzyl ether) and poly(benzyl ester) dendrimers that incorporate acid- and thermally-labile peripheral groups have been synthesized. tert-Bu ester terminated poly(benzyl ether) dendrimers were synthesized using  $\alpha$ -bromo-tert-Bu acetate in the preliminary protection step to afford the first generation alc. A standard bromination of the focal point benzylic alc. was used for the

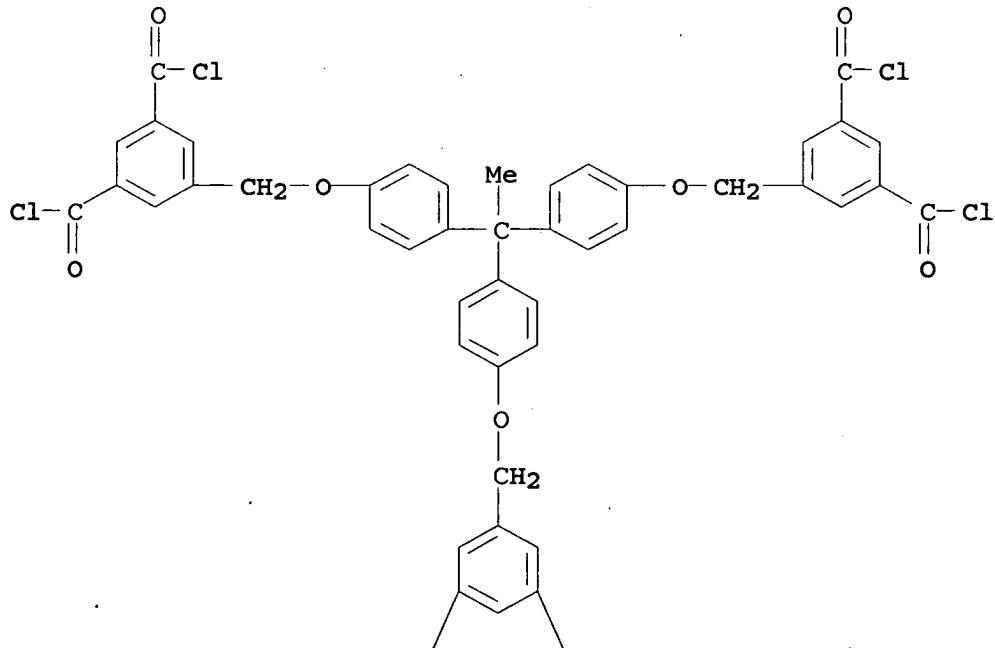
activation step, while standard Williamson ether conditions were used for the coupling steps to afford higher generation poly(benzyl ether) dendrons. tert-Bu ester terminated dendrons were then coupled to a difunctional core to produce the [G-3] dendrimer. tert-Bu carbonate (t-Boc) terminated poly(benzyl ester) dendrimers were also synthesized. This class of dendrimers was synthesized by first protecting monomeric building block 3,5-dihydroxybenzaldehyde with di-tert-Bu dicarbonate. A reductive activation step afforded the [G-1] alc. The growth steps were accomplished by either Mitsunobu etherification with 3,5-dihydroxybenzaldehyde or by esterification with 5-hydroxymethylisophthalic acid. Finally, coupling of the benzyl alc. dendrons to a polyfunctional core afforded second and third generation dendrimers. Chemical amplified resists formulated from both t-Bu ester and t-Boc terminated dendrimers show high sensitivity to DUV and e-beam irradiation. Feature sizes well below 100 nm have been routinely patterned using e-beam lithog.

IT 267874-31-7 305323-42-6 305323-45-9  
 (preparation of tert-Bu carbonate terminated dendrimer for  
 resist application)

RN 267874-31-7 HCPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5,5',5'''-[ethylidynetris(4,1-  
 phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



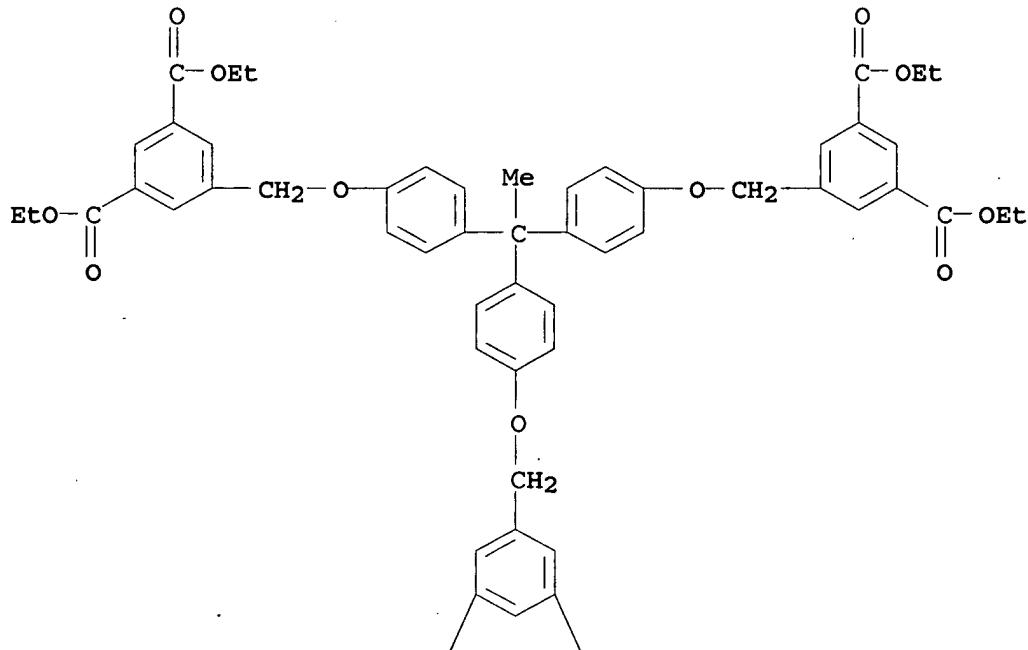
PAGE 2-A



RN 305323-42-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5'''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexaethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

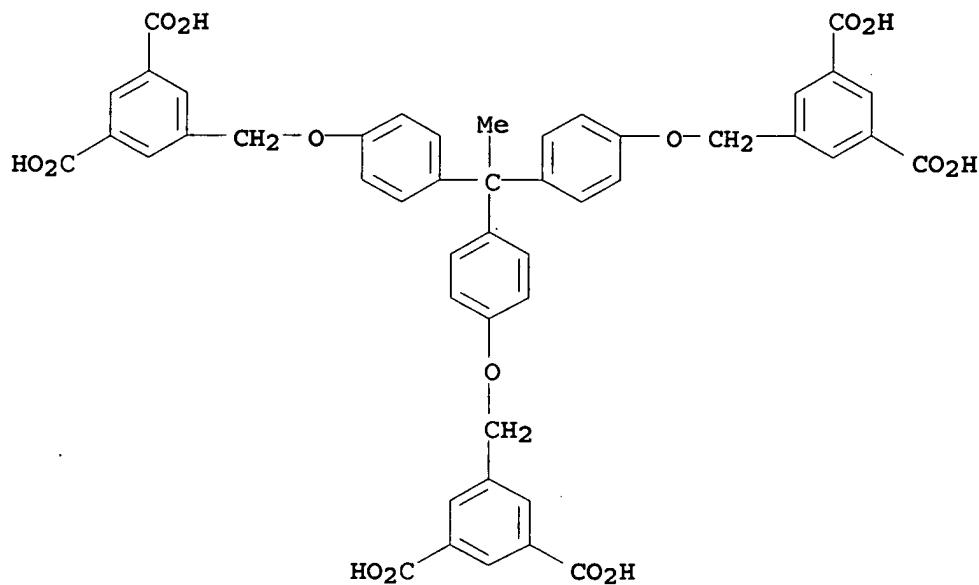


PAGE 2-A



RN 305323-45-9 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5'''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)



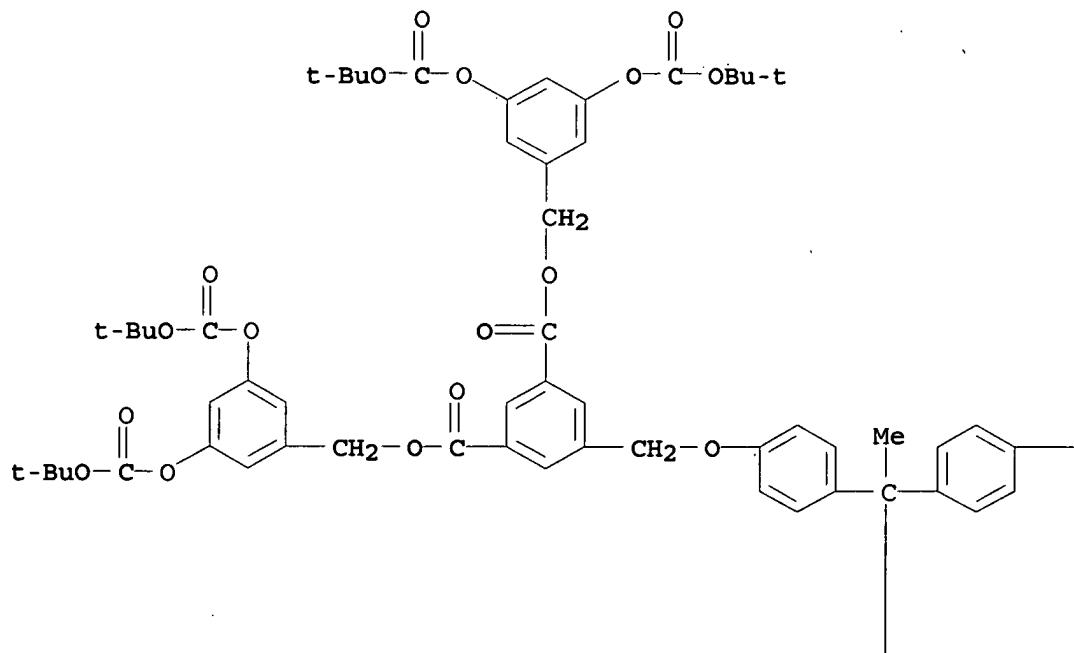
IT 267874-32-8P

(tert-Bu carbonate terminated dendrimer for chemical amplified  
resists for sub-100 nm photolithog.)

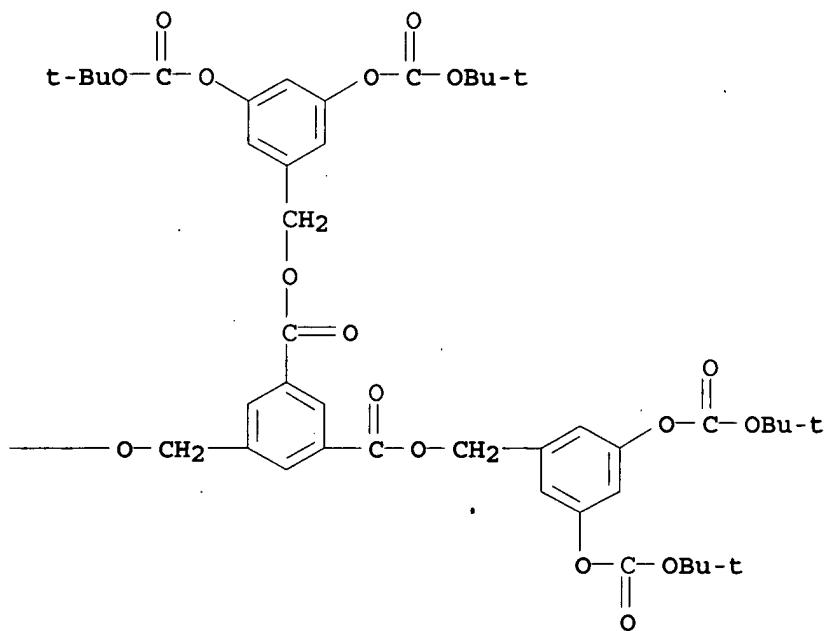
RN 267874-32-8 HCPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5'''-[ethylidynetris(4,1-  
phenyleneoxymethylene)]tris-, hexakis[[3,5-bis[(1,1-  
dimethylethoxy)carbonyl]oxy]phenyl]methyl ester (9CI) (CA INDEX  
NAME)

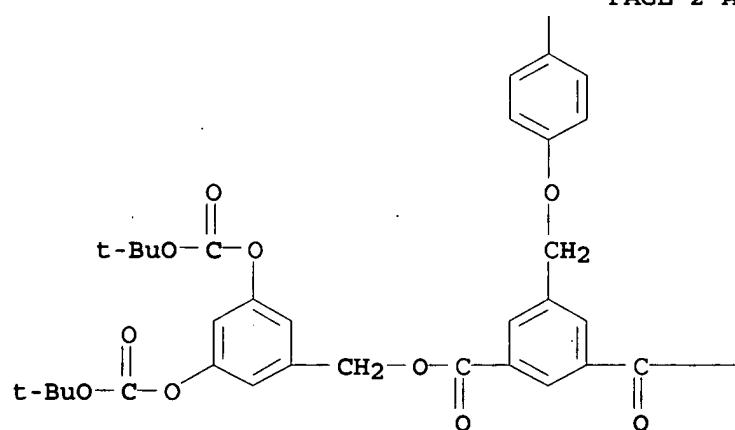
PAGE 1-A



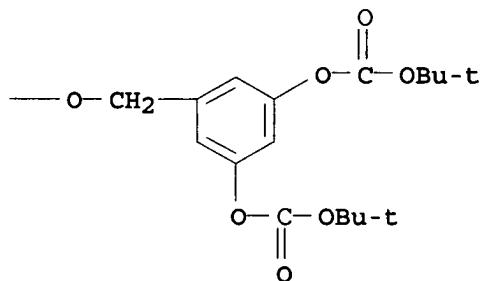
PAGE 1-B



PAGE 2-A



PAGE 2-B



CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)

ST dendrimer based chem amplified **photoresist** vacuum UV lithog

IT Electron beam **resists**

**Photoresists**  
 (chemical amplified; chemical amplified **resists** for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)

IT Polyesters, uses  
 (dendrimers; chemical amplified **resists** for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)

IT Dendritic polymers  
 (polyesters; chemical amplified **resists** for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)

IT 328396-58-3DP, tert-Bu hydroxyacetate ether-terminated  
 (dendritic; tert-Bu ester terminated dendrimer for chemical amplified **resists** for sub-100 nm photolithog.)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 213740-80-8  
 (photoacid generator; chemical amplified **resists** for sub-100 nm photolithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)

IT 267874-30-6 267874-31-7 305323-42-6  
 305323-45-9  
 (preparation of tert-Bu carbonate terminated dendrimer for **resist** application)

IT 267874-29-3 328084-37-3 328084-38-4 328084-39-5 328084-40-8  
 (preparation of tert-Bu ester terminated dendrimer for **photoresist** application)

IT 200133-25-1  
 (preparation of tert-Bu ester terminated dendrimer for **resist** application)

IT 26153-38-8, 3,5-Dihydroxybenzaldehyde  
 (reaction with di-tert-Bu carbonate in preparation of ter-Bu carbonate terminated dendrimer for **photoresist** application)

IT 34619-03-9, Di-tert-butyl carbonate

(reaction with dihydroxybenzaldehyde in preparation of ter-Bu carbonate terminated dendrimer for **resist** application)

IT 5292-43-3

(reaction with dihydroxybenzyl alc. in preparation of tert-Bu ester terminated dendrimer for **resist** application)

IT 29654-55-5, 3,5-Dihydroxybenzyl alcohol

(reaction with  $\alpha$ -bromo-tert-Bu acetate in preparation of tert-Bu ester terminated dendrimer for **resist** application)

IT 267874-32-8P

(tert-Bu carbonate terminated dendrimer for chemical amplified **resists** for sub-100 nm photolithog.)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:633845 HCAPLUS

DOCUMENT NUMBER: 133:357149

TITLE: Dendrimers with thermally labile end groups: An alternative approach to chemically amplified **resist** materials designed for sub-100 nm lithography

AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet, Jean M. J.

CORPORATE SOURCE: Department of Chemistry, University of California at Berkeley, Berkeley, CA, 94720-1460, USA

SOURCE: Advanced Materials (Weinheim, Germany) (2000), 12(15), 1118-1122

CODEN: ADVMEW; ISSN: 0935-9648

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 13 Sep 2000

AB Chemical amplified **resists** are described which are based on tert-butoxycarbonyloxy-terminated dendrimers and photoacid generators. **Resist** formulations prepared from these dendrimers were highly sensitive to both deep-UV and electron-beam exposures, providing reproducible patterning <100 nm.

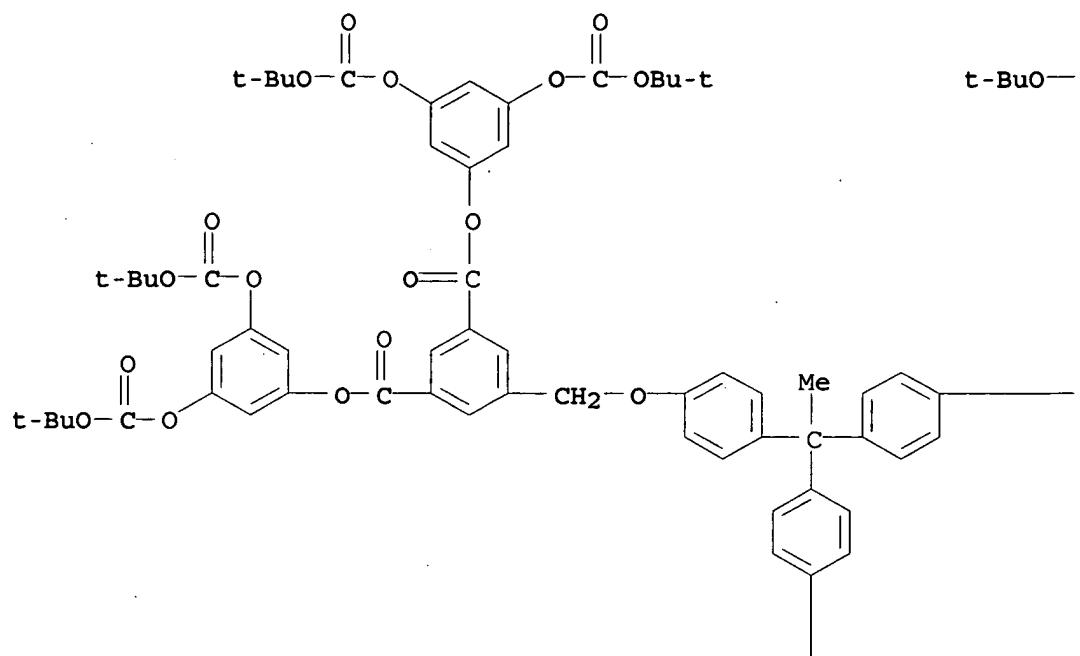
IT 305323-50-6P

(lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)

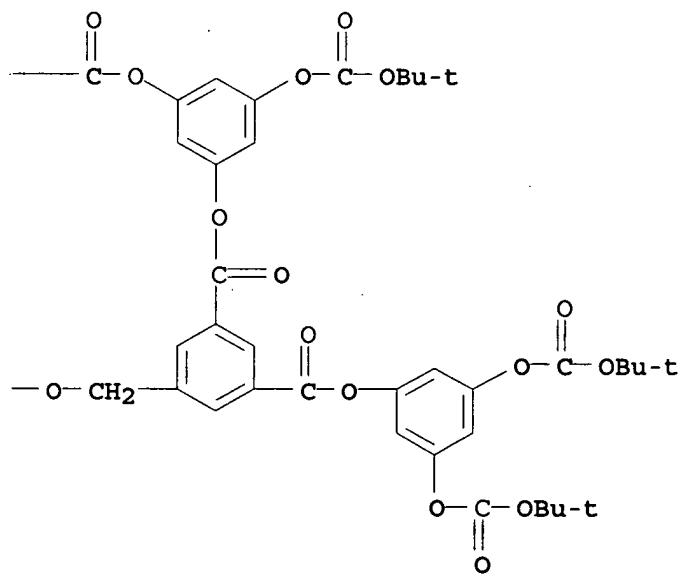
RN 305323-50-6 HCAPLUS

CN 1,3-Benzene dicarboxylic acid, 5,5',5'''- [ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexakis[3,5-bis[(1,1-dimethylethoxy)carbonyloxy]phenyl] ester (9CI) (CA INDEX NAME)

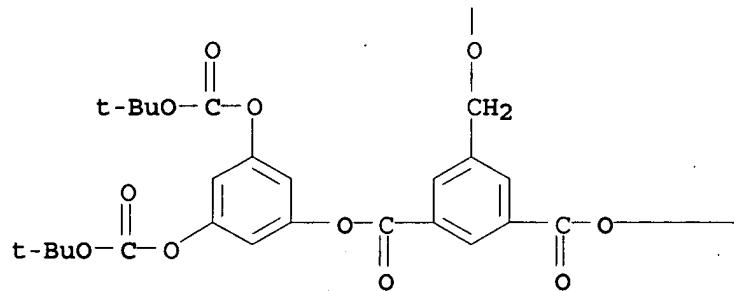
PAGE 1-A



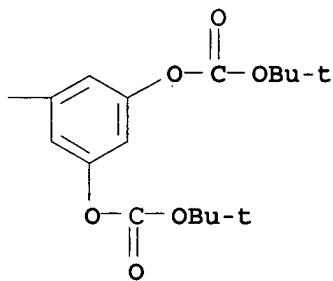
PAGE 1-B



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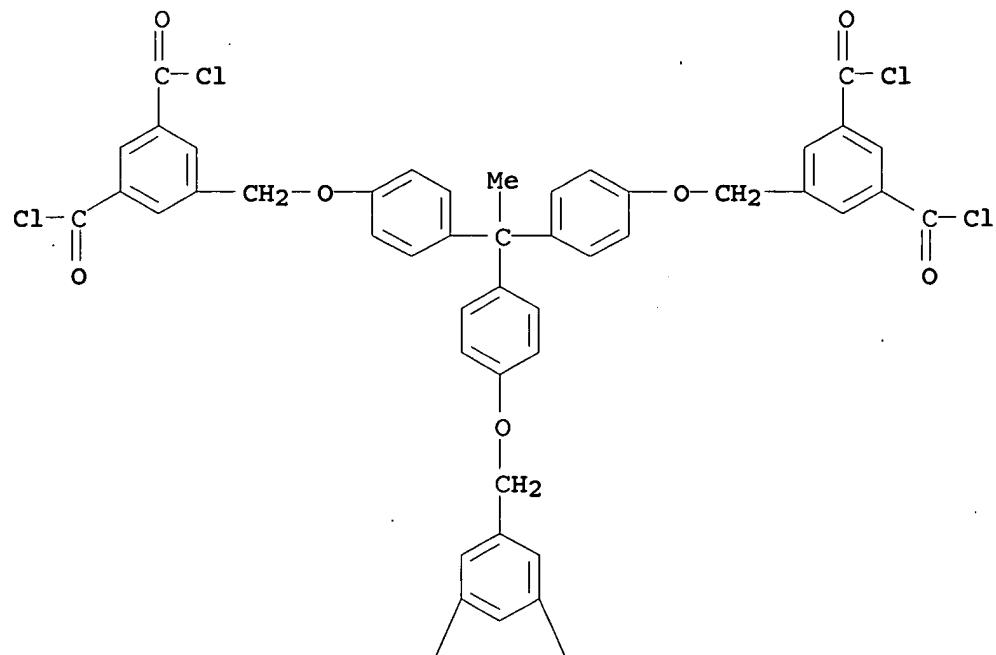


IT 267874-31-7P 305323-42-6P 305323-45-9P  
 (synthesis of tert-butoxycarbonyloxy-terminated dendrimers for  
 lithog. chemical amplified **resists** formulations)

RN 267874-31-7 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5,5',5'''-[ethylidynetris(4,1-  
 phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



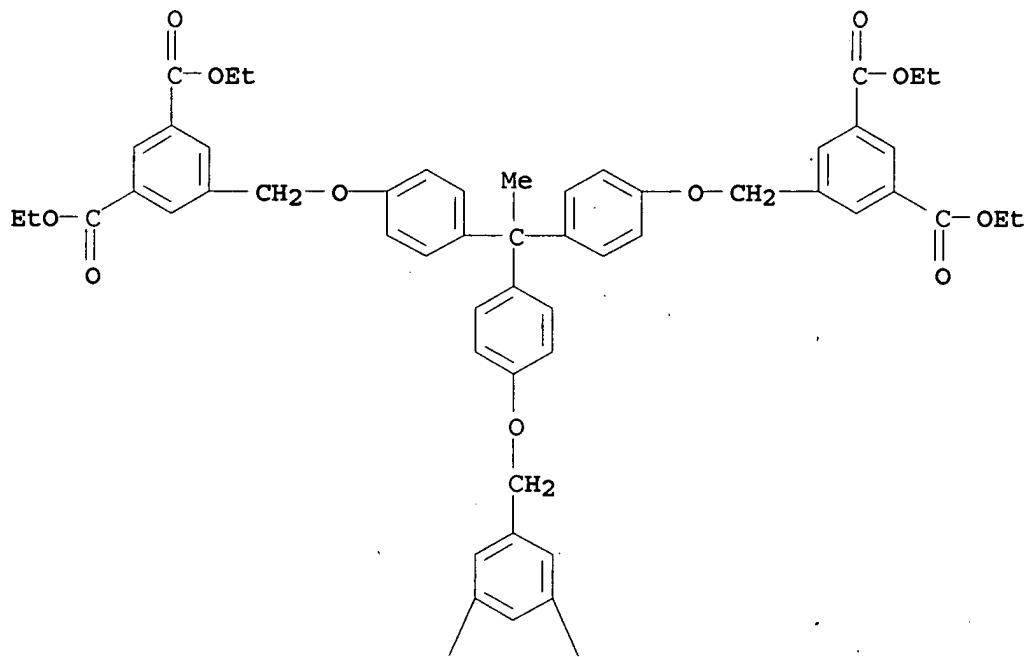
PAGE 2-A



RN 305323-42-6 HCAPLUS

CN 1,3-Benzene dicarboxylic acid, 5,5',5'''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexaethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

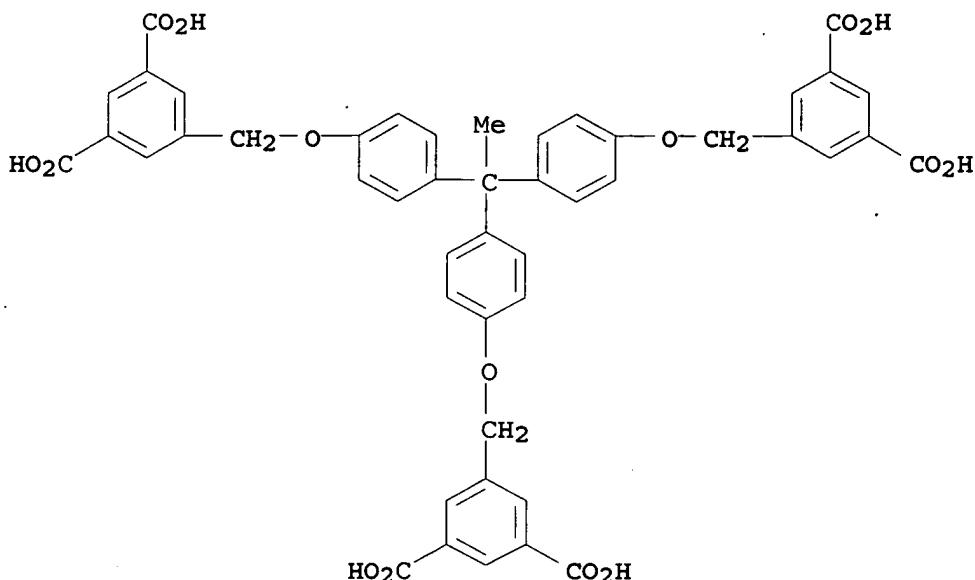


PAGE 2-A



RN 305323-45-9 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5'''- [ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST chem amplified lithog **resist** butoxycarbonyloxy terminated dendrimer; **photoresist** chem amplified butoxycarbonyloxy terminated dendrimer; electron beam **resist** chem amplified butoxycarbonyloxy terminated dendrimer  
 IT Electron beam **resists**  
     **Photoresists**  
     (chemical amplified; lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)  
 IT 305323-50-6P 305820-71-7P  
     (lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)  
 IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 240435-11-4  
     (photoacid generator; lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)  
 IT 26153-38-8P, 3,5-Dihydroxybenzaldehyde 267874-30-6P  
 267874-31-7P 305323-33-5P 305323-36-8P 305323-39-1P  
 305323-42-6P 305323-45-9P  
     (synthesis of tert-butoxycarbonyloxy-terminated dendrimers for lithog. chemical amplified **resists** formulations)  
 REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 18 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:208080 HCPLUS  
 DOCUMENT NUMBER: 132:341060  
 TITLE: Dendrimer-based chemically amplified resist materials  
 AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet, Jean M. J.  
 CORPORATE SOURCE: Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA  
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2000),

41(1), 142-143  
CODEN: ACPPAY: ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal  
LANGUAGE: English

ED Entered STN: 31 Mar 2000

ED Entered SIN: 31 Mar 2000  
AB The authors have been utili

AB The authors have been utilising a similar approach

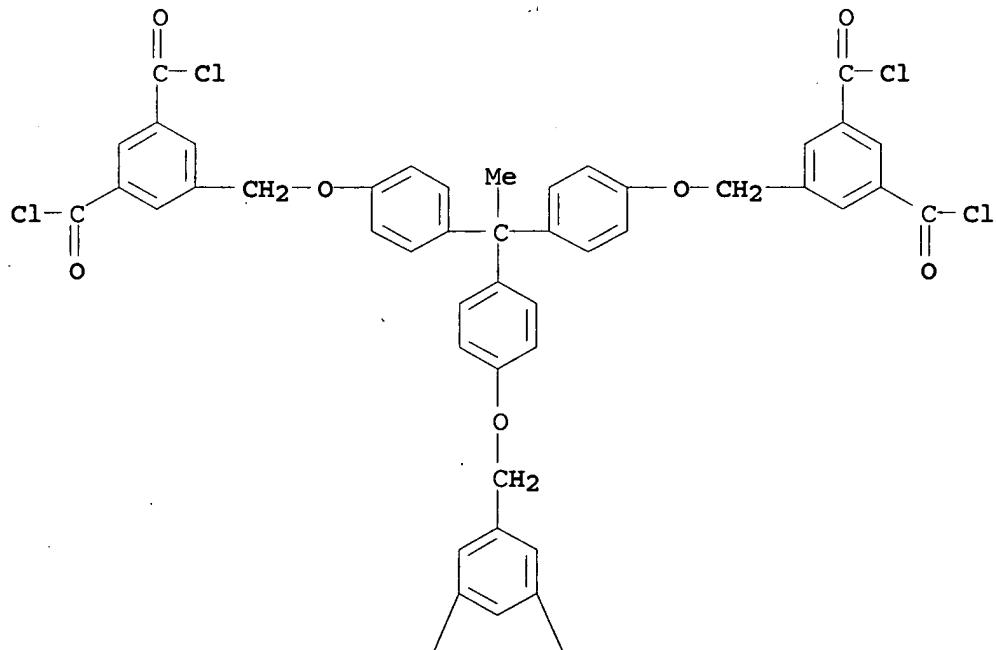
polymers in hopes of achieving an improved class of resist materials with the capability of imaging features with mol. scale resolution. Several new dendrimers were synthesized continuing acid and thermally labile groups on their periphery. The tert-Bu ester and carbonate peripheral groups can be removed by an acid-catalyzed thermolysis to drastically alter the solubility properties of the dendrimer, thus forming the basis for a 2-tone chemical amplified resist material. This 2-tone system shows a high sensitivity towards both DUV and electron beam irradiation. The authors were able to pattern feature sizes below 100 nm using e-beam lithog.

IT 267874-31-7P 267874-32-8P  
(dendrimer-based chemical amplified resist material for  
fabrication of DRAMs below 100 nm)

MANUFACTURE OF DRUGS

RN 267874-31-7 ACAPLUS  
CN 1,3-Benzenedicarbonyl dichloride, 5,5',5'''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



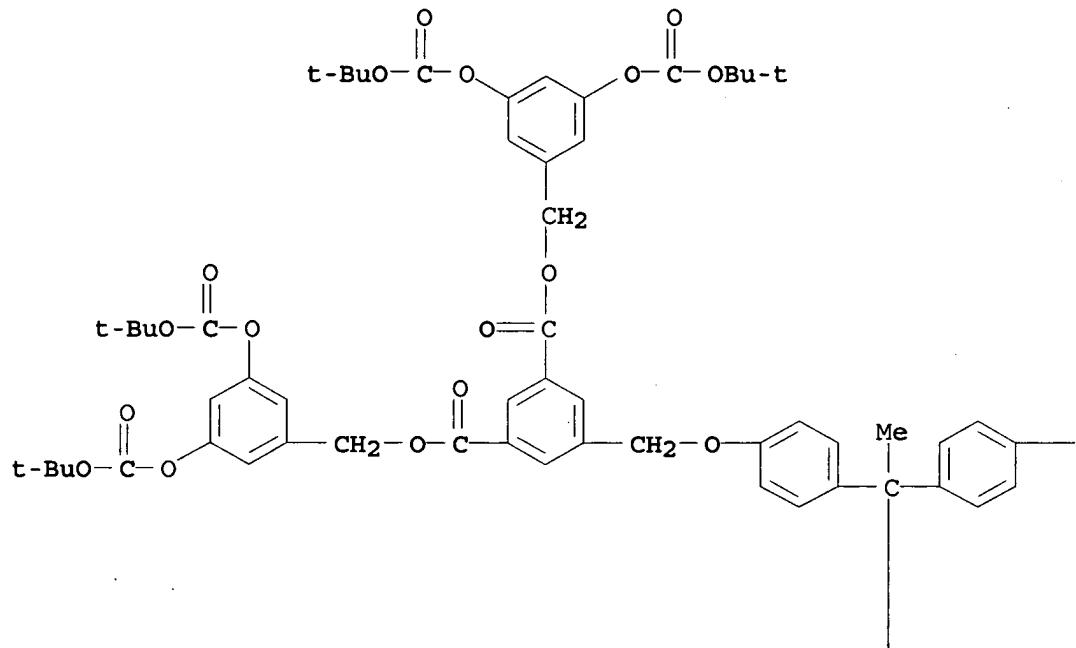
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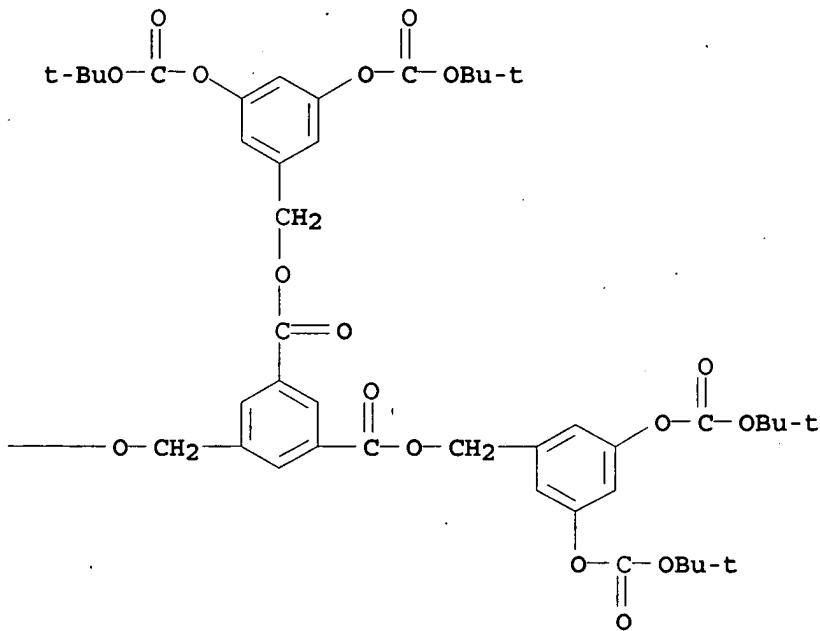
RN 267874-32-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5'''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexakis[[3,5-bis[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]methyl ester (9CI) (CA INDEX NAME)

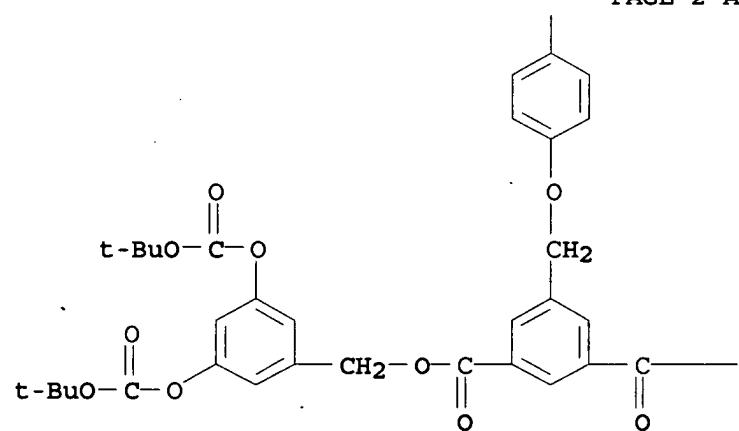
PAGE 1-A



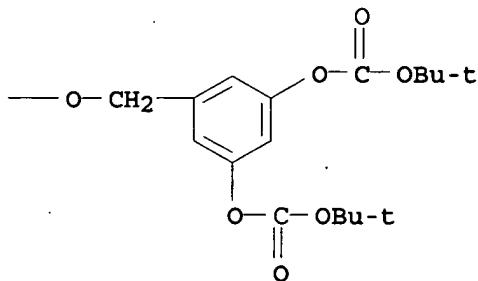
PAGE 1-B



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PAGE 2-B



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST dendrimer amplified resist tert butyl ester poly benzyl ether  
 IT Memory devices  
     (DRAM (dynamic random access); dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)  
 IT Resist  
     (chemical amplified; dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)  
 IT Electron beam lithography  
     (dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)  
 IT Dendritic polymers  
     (dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)  
 IT 267874-31-7P 267874-32-8P 267890-50-6P  
     (dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)  
 IT 99-10-5, 3,5-Dihydroxybenzoic acid 26153-38-8, 3,5-Dihydroxybenzaldehyde 200133-25-1 267663-15-0 267874-29-3  
     267874-30-6  
     (preparation of dendrimer-based chemical amplified resist material using)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:34310 HCAPLUS  
 DOCUMENT NUMBER: 132:85856  
 TITLE: Radiation-sensitive polymer compositions for photoresists  
 INVENTOR(S): Inomata, Katsumi; Akiyama, Masahiro; Iwanaga, Shinichiro  
 PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

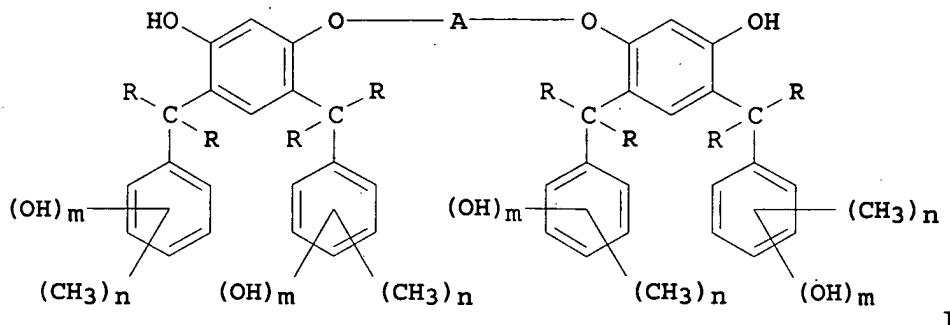
DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000010269	A	20000114	JP 1998-189671 -->	19980619
PRIORITY APPLN. INFO.:			JP 1998-189671 -->	19980619

OTHER SOURCE(S): MARPAT 132:85856

ED Entered STN: 14 Jan 2000

GI

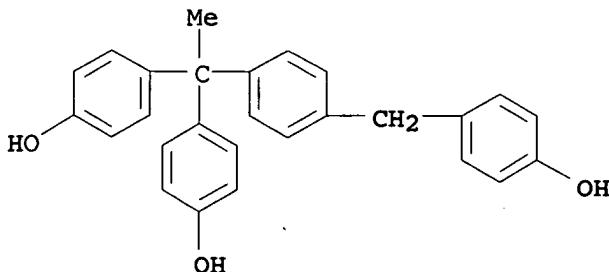


AB The compns. contain (A) alkaline-soluble novolak resin and (B) quinonediazide sulfonic acid ester of polyphenols (I; R = H, alkyl; A =  $\text{CH}_2\text{CH}_2$ ,  $\text{m-CH}_2\text{C}_6\text{H}_4\text{CH}_2$ ; m = 1-3; n = 0-3). The compns. are especially useful as pos. resists, sensitive against UV and far UV, used in LSI fabrication. The compns. can be uniformly applied onto large-sized substrates, and have high resolution, excellent pattern crosscut section characteristics, and exposure margin.

IT 143016-47-1DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride (alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. resists for fabrication of LSI)

RN 143016-47-1 HCAPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis-(9CI) (CA INDEX NAME)



IC ICM G03F007-004  
 ICS C08K005-42; C08L061-06; G03F007-039  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST UV sensitive photoresist LSI fabrication; far UV sensitive  
 photoresist LSI fabrication; alk sol novolak resin pos  
 photoresist; polyphenol quinonediazide sulfonate novolak pos  
 photoresist  
 IT Electronic device fabrication  
 (LSI; alkaline-soluble novolak resins and polyphenol quinonediazide  
 sulfonate as (far) UV-sensitive pos. resists for  
 fabrication of LSI)  
 IT Positive photoresists  
 (UV; alkaline-soluble novolak resins and polyphenol quinonediazide  
 sulfonate as (far) UV-sensitive pos. resists for  
 fabrication of LSI)  
 IT Integrated circuits  
 (alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate  
 as (far) UV-sensitive pos. resists for fabrication of  
 LSI)  
 IT Phenolic resins, uses  
 (novolak, alkaline-soluble; alkaline-soluble novolak resins and polyphenol  
 quinonediazide sulfonate as (far) UV-sensitive pos. resists  
 for fabrication of LSI)  
 IT Phenols, uses  
 (polyphenols, nonpolymeric, esters; alkaline-soluble novolak resins and  
 polyphenol quinonediazide sulfonate as (far) UV-sensitive pos.  
 resists for fabrication of LSI)  
 IT Resists  
 (pos.-working radiation-sensitive; alkaline-soluble novolak resins and  
 polyphenol quinonediazide sulfonate as (far) UV-sensitive pos.  
 resists for fabrication of LSI)  
 IT 3770-97-6DP, 1,2-Naphthoquinonediazido-5-sulfonyl chloride, esters  
 with polyphenols 59932-82-0P, m-Cresol-formaldehyde-3,4-xylenol  
 copolymer 143016-47-1DP, reaction products with  
 1,2-Naphthoquinonediazido-5-sulfonyl chloride 144595-69-7P  
 144595-70-0P 161261-16-1P 167094-72-6DP, reaction products with  
 1,2-Naphthoquinonediazido-5-sulfonyl chloride 221471-83-6DP,  
 reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride  
 254099-37-1DP, reaction products with 1,2-Naphthoquinonediazido-5-  
 sulfonyl chloride 254099-38-2DP, reaction products with  
 1,2-Naphthoquinonediazido-5-sulfonyl chloride  
 (alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate  
 as (far) UV-sensitive pos. resists for fabrication of  
 LSI)

L61 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

1999:564113 HCAPLUS

DOCUMENT NUMBER:

131:305040

TITLE:

Intramolecular Singlet-Singlet and Triplet-Triplet  
 Energy Transfer in Adamantyl-Linked  
 Trichromophores

AUTHOR(S):

Tan, Z.; Kote, R.; Samaniego, W. N.; Weininger, S.  
 J.; McGimpsey, W. G.

CORPORATE SOURCE:

Department of Chemistry and Biochemistry,  
 Worcester Polytechnic Institute, Worcester, MA,  
 01609, USA

SOURCE:

Journal of Physical Chemistry A (1999),

103 (38), 7612-7620  
 CODEN: JPCAFH; ISSN: 1089-5639

PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

ED Entered STN: 08 Sep 1999

AB Intramol. singlet-singlet energy transfer (SSET) has been observed in 4-(3-(x-phenanthryl)-1-adamantyl)-4'-(3-(2-naphthyl)-1-adamantyl)biphenyl (3), a trichromophoric mol. consisting of phenanthrene, biphenyl, and naphthalene groups linked sequentially by adamantane bridges in which chromophore attachment is at the tertiary 1- and 3-adamantyl positions. UV-visible absorption, steady-state and time-resolved fluorescence, low-temperature phosphorescence and room-temperature

laser flash photolysis measurements indicate that efficient SSET takes place with equal probability from the central biphenyl group to each of the terminal chromophores with a rate constant,  $k > 6 \times 10^{10}$  s-1. Slower SSET from the naphthyl chromophore to the phenanthryl group occurs with a rate constant  $k \approx 9 \times 10^6$  s-1. The exptl. determined SSET efficiency and a calcn. of the critical Foerster distance, when combined with mol. modeling, indicate that a Foerster mechanism is sufficient to account for the observed SSET process. Intramol. triplet-triplet energy transfer (TTET) from the phenanthryl group to the naphthyl chromophore appears to occur by a slow, thermally activated transfer step from the phenanthrene ring to the central biphenyl group followed by rapid exergonic transfer to the naphthyl group. TTET in the reverse direction involving thermal activation of the naphthyl triplet also apparently may take place.

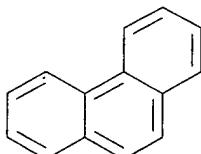
IT 247040-44-4P

(photoinduced intramol. singlet-singlet and triplet-triplet energy transfer in trichromophore mol. containing phenanthrene and biphenyl and naphthalene groups linked sequentially by adamantane bridges)

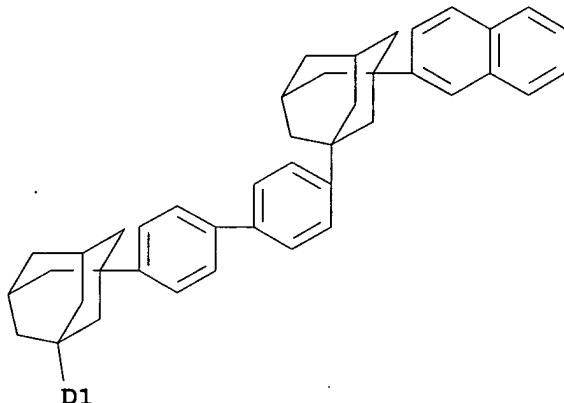
RN 247040-44-4 HCAPLUS

CN Tricyclo[3.3.1.13,7]decane, 1-(2-naphthyl)-3-[4'-(3-[2(or 3)-phenanthrenyl]tricyclo[3.3.1.13,7]dec-1-yl)[1,1'-biphenyl]-4-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

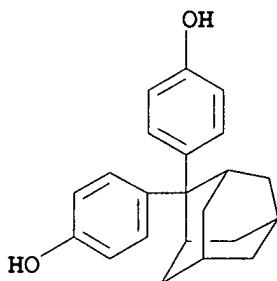


CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 22  
 IT 247040-44-4P  
 (photoinduced intramol. singlet-singlet and triplet-triplet energy transfer in trichromophore mol. containing phenanthrene and biphenyl and naphthalene groups linked sequentially by adamantane bridges)  
 REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

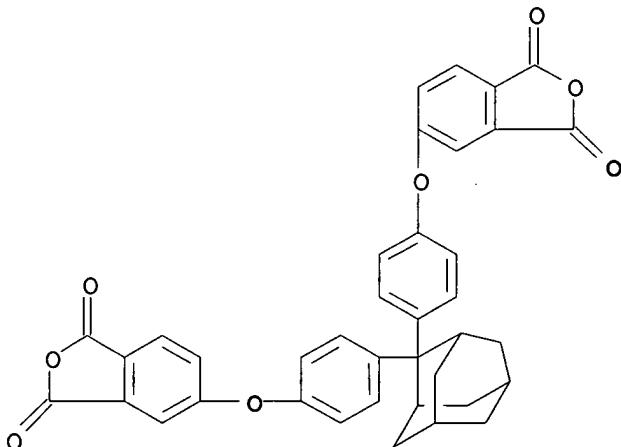
L61 ANSWER 21 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1999:281610 HCPLUS  
 DOCUMENT NUMBER: 131:74049  
 TITLE: Synthesis and properties of new adamantane-based poly(ether imide)s  
 AUTHOR(S): Hsiao, Sheng-Huei; Lee, Ching-Tang; Chern, Yaw-Terng  
 CORPORATE SOURCE: Dep. Chemical Eng., Tatung Institute Technology, Taipei, Peop. Rep. China  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(11), 1619-1628  
 CODEN: JPACEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 07 May 1999  
 AB A new adamantane-based bis(ether anhydride), 2,2-bis[4-(3,4-dicarboxyphenoxy)phenyl]adamantane dianhydride, was prepared in 3 steps starting from nitro-displacement of 4-nitrophthalonitrile with the K phenolate of 2,2-bis(4-hydroxyphenyl)adamantane. A series of adamantane-containing poly(ether imides) was prepared from the adamantane-based bis(ether anhydride) and aromatic diamines by a conventional two-stage synthesis in which the poly(ether amic acids) obtained in the first stage were heated stage-by-stage at 150-270°C to give the poly(ether imides). The intermediate poly(ether amic acids) had inherent viscosities between 0.56 and 1.92 dL/g. Except for those from p-phenylenediamine, m-phenylenediamine, and benzidine, all the poly(ether amic acid) films could be thermally converted into transparent, flexible, and tough poly(ether imide) films. All the poly(ether imides) showed limited solubility in organic

solvents, although they were amorphous in nature as evidenced by X-ray diffractograms. Glass transition temps. of these poly(ether imides) were recorded in the range of 242-317°C by differential scanning calorimetry and of 270-322°C by dynamic mech. anal. They exhibited high resistance to thermal degradation, with 10% weight loss temps. being recorded between 514-538°C in nitrogen and 511-527°C in air.

IT 52211-74-2P, 2,2-Bis(4-hydroxyphenyl)adamantane  
(in preparation of bis[(dicarboxyphenoxy)phenyl]adamantane dianhydride monomer)  
RN 52211-74-2 HCAPLUS  
CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



IT 215094-06-7P  
(preparation and polymerization with aromatic diamines)  
RN 215094-06-7 HCAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-[tricyclo[3.3.1.13,7]decylidenebis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



CC 35-5 (Chemistry of Synthetic High Polymers)  
ST adamantane polyether polyimide prep property; glass temp adamantane polyether polyimide; heat resistance adamantane polyether polyimide  
IT Bond angle  
Bond length  
Glass transition temperature  
Heat-resistant materials  
(preparation and properties of adamantane-based poly(ether imides))

IT 52211-74-2P, 2,2-Bis(4-hydroxyphenyl)adamantane  
 228396-86-9P, 2,2-Bis[4-(3,4-dicyanophenoxy)phenyl]adamantane  
 (in preparation of bis[(dicarboxyphenoxy)phenyl]adamantane dianhydride monomer)

IT 215094-06-7P  
 (preparation and polymerization with aromatic diamines)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 22 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:244141 HCPLUS

DOCUMENT NUMBER: 131:11450

TITLE: Laser flash photolysis of 3-noradamantyl(phenyl)diazomethane: generation, detection and kinetics of 2-phenyladamantene  
 Hirai, Katsuyuki; Tomioka, Hideo; Okazaki, Takao; Tokunaga, Kazuhiko; Kitagawa, Toshikazu; Takeuchi, Ken'ichi

CORPORATE SOURCE: Chemistry Department for Materials, Faculty of Engineering, Mie University, Mie, 514, Japan

SOURCE: Journal of Physical Organic Chemistry (1999), 12(2), 165-169

CODEN: JPOCEE; ISSN: 0894-3230

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

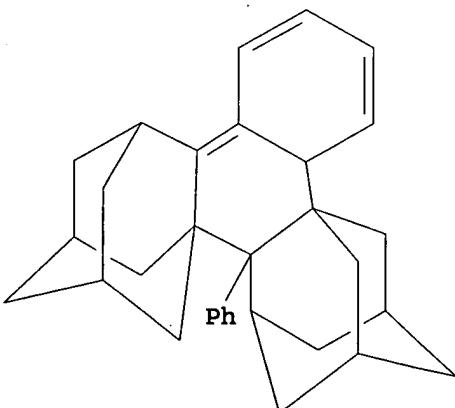
ED Entered STN: 21 Apr 1999

AB Laser flash photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature generates 2-phenyladamantene, which decays with second-order kinetics ( $2k/\epsilon l = 1.5 + 102 \text{ s}^{-1}$ ) to give a dimer and is shown to react with oxygen and tri(n-butyl)tin hydride much faster than with methanol, thus revealing profound radical character of the twisted double bond.

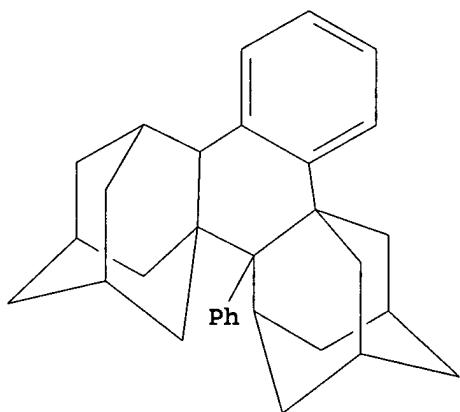
IT 225915-82-2P 225915-83-3P  
 (photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature)

RN 225915-82-2 HCPLUS

CN 5H,11H-4b,8:6,10:10b,14:12,16-Tetramethanodicycloocta[a,c]naphthalene, 4a,6,7,8,9,10,10a,12,13,14,15,16-dodecahydro-10a-phenyl- (9CI) (CA INDEX NAME)



RN 225915-83-3 HCAPLUS

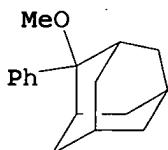
CN 5H,11H-4b,8:6,10:10b,14:12,16-Tetramethanodicycloocta[a,c]naphthalene,  
6,7,8,9,10,10a,12,13,14,15,16,16a-dodecahydro-10a-phenyl- (9CI) (CA  
INDEX NAME)

IT 225915-84-4P

(photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of methanol)

RN 225915-84-4 HCAPLUS

CN Tricyclo[3.3.1.13,7]decane, 2-methoxy-2-phenyl- (CA INDEX NAME)

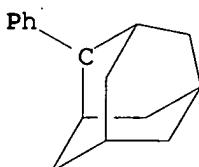


IT 186597-63-7P

(photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of tri(n-butyl)tin hydride)

RN 186597-63-7 HCAPLUS

CN Tricyclo[3.3.1.13,7]dec-2-yl, 2-phenyl- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 225915-82-2P 225915-83-3P

(photoproduct; reaction kinetics of phenyladamantene produced in

photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature)

IT 225915-84-4P 225915-85-5P  
 (photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of methanol)

IT 186597-63-7P  
 (photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of tri(n-butyl)tin hydride)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 23 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:576608 HCPLUS

DOCUMENT NUMBER: 129:204011

TITLE: Epoxy resin compositions with moisture and solder heat resistance and semiconductor devices sealed with the compositions

INVENTOR(S): Yamamoto, Isao

PATENT ASSIGNEE(S): Toshiba Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10231352	A	19980902	JP 1997-49857 ---	19970218

PRIORITY APPLN. INFO.:	JP 1997-49857 ---	19970218
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ED Entered STN: 10 Sep 1998

GI

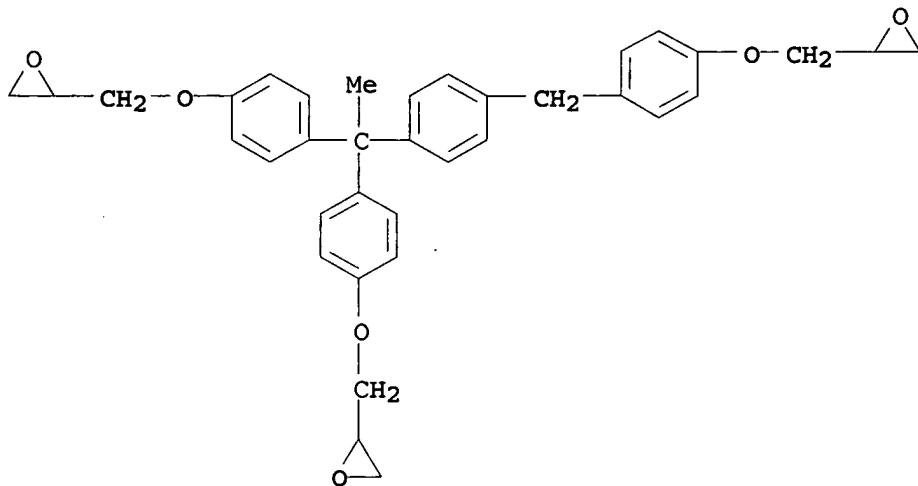
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compns. are composed of (a) polyfunctional epoxy resins I (R = alkyl; n ≥ 0), (B) terpene-modified phenolic resins II (R = alkyl; n ≥ 0), (C) 25-93% inorg. fillers, and (D) curing accelerators. Semiconductor chips are sealed with the compns. to give title devices. Thus, I 6.2, II (R = Me, n = 0) 4.8, SiO<sub>2</sub> powder 88, curing accelerator 0.3, ester wax 0.3, and silane coupling agent 0.4% were mixed to give a molding material showing water absorption 0.30%, glass transition temperature 170°, bending strength (JIS-K-6911) 14.0 kg/mm<sup>2</sup> (at room temperature) and 2.5 kg/mm<sup>2</sup> (at 220°), and good solder heat, moisture, and crack resistance.

IT 212246-62-3DP, alkyl derivs., polymers  
 (crosslinked with terpene-modified phenolic resin; epoxy resin compns. with moisture and solder heat resistance as sealants for semiconductor devices)

RN 212246-62-3 HCPLUS

CN Oxirane, 2,2'-[[1-[4-[(4-oxiranylmethoxy)phenyl]methyl]phenyl]ethylen]bis(4,1-phenyleneoxymethylene)bis- (9CI) (CA INDEX NAME)



IC ICM C08G059-32  
 ICS C08G059-62; C08K003-00; C08K003-36; C08L063-00; H01L023-29;  
 H01L023-31

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37, 76

ST epoxy resin semiconductor device sealing; moisture **resistance**  
 epoxy resin semiconductor sealing; solder heat **resistance**  
 epoxy resin semiconductor; terpene phenolic resin epoxy semiconductor  
 sealing; inorg filler epoxy resin semiconductor sealing

IT Epoxy resins, uses  
 (crosslinked with terpene-modified phenolic resin; epoxy resin  
 compns. with moisture and solder heat **resistance** as  
 sealants for semiconductor devices)

IT Electronic packaging materials  
 Heat-**resistant** materials  
 Semiconductor devices  
 Water-**resistant** materials  
 (epoxy resin compns. with moisture and solder heat  
**resistance** as sealants for semiconductor devices)

IT Fillers  
 (inorg.; epoxy resin compns. with moisture and solder heat  
**resistance** as sealants for semiconductor devices)

IT Phenolic resins, uses  
 (novolak, crosslinking agents; epoxy resin compns. with moisture  
 and solder heat **resistance** as sealants for semiconductor  
 devices)

IT Phenolic resins, uses  
 (terpenoid, crosslinking agents; epoxy resin compns. with moisture  
 and solder heat **resistance** as sealants for semiconductor  
 devices)

IT 212246-62-3DP, alkyl derivs., polymers  
 (crosslinked with terpene-modified phenolic resin; epoxy resin  
 compns. with moisture and solder heat **resistance** as  
 sealants for semiconductor devices)

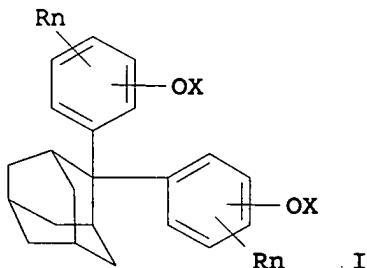
IT 57047-75-3  
 (crosslinking agents; epoxy resin compns. with moisture and solder  
 heat **resistance** as sealants for semiconductor devices)

IT 7631-86-9, Silica, uses  
 (filler; epoxy resin compns. with moisture and solder heat

resistance as sealants for semiconductor devices)

L61 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1998:314774 HCAPLUS  
 DOCUMENT NUMBER: 129:28745  
 TITLE: Bis(hydroxyphenyl)adamantanes, epoxy compounds, epoxy resin compositions, and electronic device packaging compositions thereof  
 INVENTOR(S): Hasegawa, Yoshikazu; Shimamura, Yoshio; Kogo, Makiko  
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10130371	A	19980519	JP 1996-305514	19961101
PRIORITY APPLN. INFO.:				<--
OTHER SOURCE(S): MARPAT 129:28745				19961101
ED Entered STN: 28 May 1998				<--
GI				

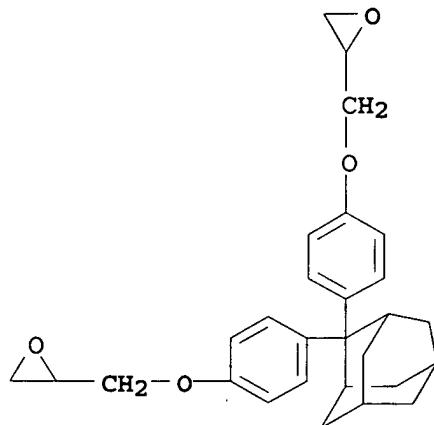


AB The bis(hydroxyphenyl)adamantanes have the structure I (X = H, glycidyl; when X is H, R do not contain glycidyloxy; when X is glycidyl, R do not contain OH; R = alkyl, alkylene, aralkyl, aryl, halogen, alkoxy, OH, glycidyloxy; n = 0-4). The adamantanes give polymers having excellent heat **resistance**, thermal conductivity, n., elec. properties, etc. Their derivative epoxy resin compns. and the packaging compns. are also claimed. Thus, reacting 50 g 2-adamantanone and 150 g PhOH in HCl at 80° gave 25.3 g white crystal of 2,2-bis(4'-hydroxyphenyl)adamantane with m.p. 321°, 14 g of which was reacted with 32.4 g epichlorohydrin to give 17.1 g white crystal of 2,2-bis(4'-glycidyloxyphenyl)adamantane (II) with m.p. 160°, epoxy equiv 217, and Abbe number at 25° 1.6. A mixture of II 1, a novolak 0.45, and PPh<sub>3</sub> 0.01 g was cured at 180° and crushed to give pellets showing Tg 185°.

IT 56323-07-0P  
 (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and

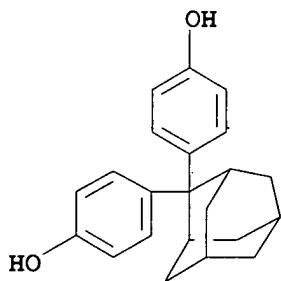
their heat-resistant compns. and electronic device packagings)

RN 56323-07-0 HCAPLUS  
 CN Oxirane, 2,2'-(tricyclo[3.3.1.13,7]decylidenebis(4,1-phenyleneoxymethylene))bis- (CA INDEX NAME)



IT 52211-74-2P  
 (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

RN 52211-74-2 HCAPLUS  
 CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



IC ICM C08G059-26

ICS C08G059-62; C09K003-10

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 25, 35, 38, 76

IT Electronic packaging materials

Heat-resistant materials

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT Epoxy resins, preparation

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT Phenolic resins, properties

(novolak; bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device

packagings)

IT 56323-07-0P (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT 52211-74-2P (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT 106-89-8, Epichlorohydrin, reactions (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

L61 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:34103 HCAPLUS  
 DOCUMENT NUMBER: 126:67524  
 TITLE: Positive-working radiation-sensitive resin composition  
 INVENTOR(S): Kawabe, Yasumasa; Yamanaka, Tsukasa  
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08262719	A	19961011	JP 1995-66322	19950324 <--
PRIORITY APPLN. INFO.:			JP 1995-66322	19950324 <--

ED Entered STN: 17 Jan 1997

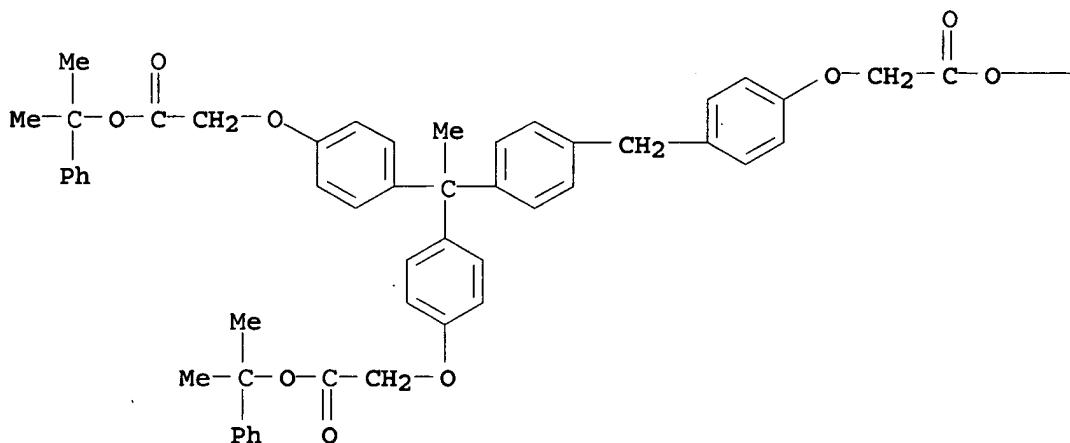
AB The composition comprises (A) an alkali-soluble resin, (B) an acid generator, (C) an acid-decomposable dissoln. inhibitor of which the solubility increases by acids, and (D) propylene glycol monoalkyl ether propionate. The composition comprises (A) a resin with acid decomposable group and of which the solubility in alkali developer increases by acids, (B), and (D). The composition comprises (A) an alkali-soluble resin, (B) an acid generator (except 1,2-naphthoquinonediazide), and (D). The composition is nontoxic and shows good coatability, storage stability, high sensitivity and resolution

IT 185107-57-7P (dissoln. inhibitor; pos.-working radiation-sensitive resin composition containing propylene glycol monoalkyl ether propionate as solvent)

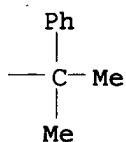
RN 185107-57-7 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[[4-[2-(1-methyl-1-phenylethoxy)-2-oxoethoxy]phenyl]methyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-(1-methyl-1-phenylethyl) ester (9CI) (CA INDEX NAME)

## PAGE 1-A

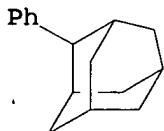


## PAGE 1-B



IC ICM G03F007-039  
 ICS G03F007-00; G03F007-004; G03F007-028; G03F007-033; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic**  
 and Other Reprographic Processes)  
 Section cross-reference(s): 37  
 ST pos working radiation sensitive **resist**; toxic radiation  
 sensitive **resist** compn; propylene glycol alkyl ether  
 propionate **resist**  
 IT **Resists**  
 (pos.-working radiation-sensitive; pos.-working radiation-sensitive  
 resin composition containing propylene glycol monoalkyl ether propionate as  
 solvent)  
 IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-70-5P  
 153840-05-2P 185107-57-7P 185107-58-8P  
 (dissoln. inhibitor; pos.-working radiation-sensitive resin composition  
 containing propylene glycol monoalkyl ether propionate as solvent)  
 IT 96839-34-8P, 2,6-Dinitrobenzyl alcohol  
 (preparation of acid generator for **resist** composition)  
 IT 85-46-1,  $\alpha$ -Naphthalenesulfonyl chloride 87-66-1, Pyrogallol  
 98-59-9, p-Toluenesulfonyl chloride 124-63-0, Methanesulfonyl  
 chloride 606-31-5, 2,6-Dinitrobenzaldehyde 824-79-3, Sodium  
 p-toluenesulfinate 825-52-5 1569-69-3, Cyclohexylthiol  
 29256-75-5 67580-39-6, Sodium 9,10-dimethoxyanthracene-2-sulfonate  
 75007-13-5, Diphenyliodonium perchlorate  
 (preparation of acid generator for **resist** composition)  
 IT 110-87-2, 3,4-Dihydro-2H-pyran 4466-18-6 5292-43-3, tert-Butyl  
 bromoacetate 24424-99-5, Di-tert-butyl dicarbonate 76937-83-2,  
 $\alpha,\alpha,\alpha',\alpha',\alpha'',\alpha''$ -Hexakis(4-  
 hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8 153698-47-6  
 (preparation of dissoln. inhibitor for **resist** composition)

L61 ANSWER 26 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:655936 HCPLUS  
 DOCUMENT NUMBER: 123:183137  
 TITLE: Triplet energy accepting properties of styrenes:  
 examination of the relationship between the degree  
 of "non-vertical" behavior and the magnitude of a  
 specific single-bond torsional angle  
 AUTHOR(S): Davies, M. K.; Gorman, A. A.; Hamblett, I.; Unett,  
 D. J.  
 CORPORATE SOURCE: Department of Chemistry, University of Manchester,  
 Manchester, M13 9PL, UK  
 SOURCE: Journal of Photochemistry and Photobiology, A:  
 Chemistry (1995), 88(1), 5-9  
 CODEN: JPPCEJ; ISSN: 1010-6030  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 05 Jul 1995  
 AB The triplet energy accepting properties of phenylethene (styrene),  
 2-methyl-1-phenylpropene and phenyladamantylidene have been examined. It  
 is shown that the degree of "non-vertical" behavior, i.e. the donor  
 triplet energy range over which non-classical behavior is observed,  
 increases with the degree of torsion about the formal single bond  
 between two adjacent components of a conjugated  $\pi$  system. The  
 result strongly supports the contention that the key to "non-vertical"  
 behavior, as it applies to conjugated  $\pi$  systems, is torsion about  
 formal single bonds on the ground state surface.  
 IT 19066-24-1  
 (triplet energy acceptance in relation to degree of nonvertical  
 behavior and magnitude of specific single-bond torsional angle)  
 RN 19066-24-1 HCPLUS  
 CN Tricyclo[3.3.1.13,7]decane, 2-phenyl- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 IT 100-42-5, Styrene, properties 768-49-0, 2-Methyl-1-phenylpropene  
 19066-24-1  
 (triplet energy acceptance in relation to degree of nonvertical  
 behavior and magnitude of specific single-bond torsional angle)

L61 ANSWER 27 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:385953 HCPLUS  
 DOCUMENT NUMBER: 122:147304  
 TITLE: Photodefinable polymers containing  
 perfluorocyclobutane groups  
 INVENTOR(S): Babb, David A.; Richey, W. Frank; Clement,  
 Katherine S.; Moyer, Eric S.; Sorenson, Marius W.  
 PATENT ASSIGNEE(S): Dow Chemical Co., USA  
 SOURCE: PCT Int. Appl., 75 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9415258	A1	19940707	WO 1993-US11562	19931201
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W: CA, JP, KR RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE US 5426164	A	19950620	US 1992-996452	19921224
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CA 2151151	A1	19940707	CA 1993-2151151	19931201
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EP 676062	A1	19951011	EP 1994-902456	19931201
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R: BE, DE, FR, GB, IT, NL JP 08505168	T	19960604	JP 1993-515164	19931201
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US 5489623	A	19960206	US 1995-428740	19950425
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PRIORITY APPLN. INFO.:			US 1992-996452	A 19921224
			<--	
			WO 1993-US11562	W 19931201
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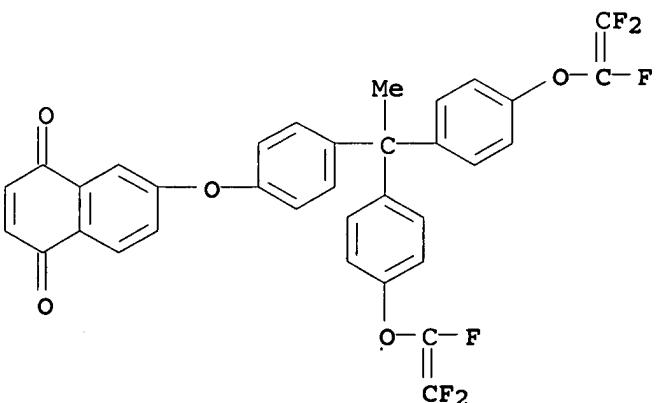
ED Entered STN: 03 Mar 1995

AB The title polymer has  $\geq 1$  photoactive site and  $>1$  perfluorocyclobutane group. New monomers containing photoactive sites or photoactive precursors and  $\geq 1$  perfluorovinyl group are useful for making such polymers. Processes of making such polymers and the monomers from which they are made are disclosed. The polymers are useful in coatings, photoresists, and other photoactive applications.

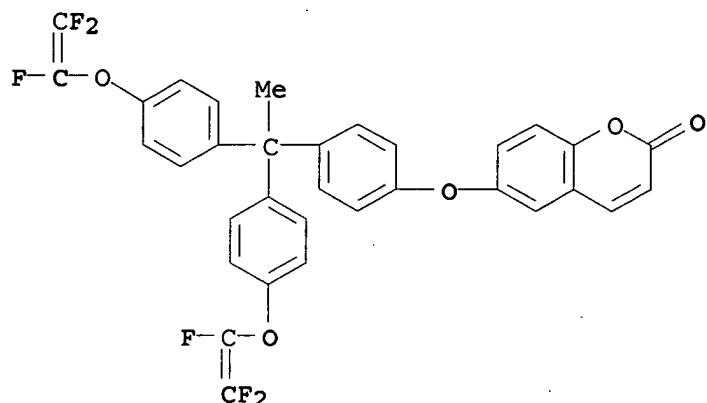
IT 161250-87-9, 6-(4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)phenoxy)naphthoquinone 161250-88-0, 6-(4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)phenoxy)coumarin 161250-89-1, 7-(4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)phenoxy)coumarin 161250-91-5, 2-(4-(4-(1,1-Bis(trifluoroethoxyphenyl)ethyl)phenoxy)benzylidene)cyclohexanone (monomer for photodefinable polymer)

RN 161250-87-9 HCAPLUS

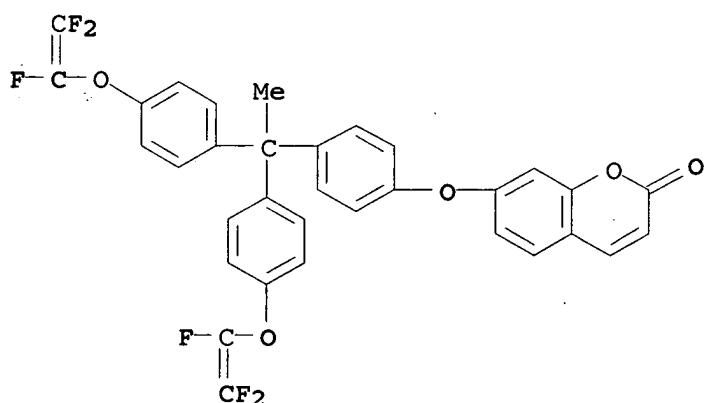
CN 1,4-Naphthalenedione, 6-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy]-(9CI) (CA INDEX NAME)



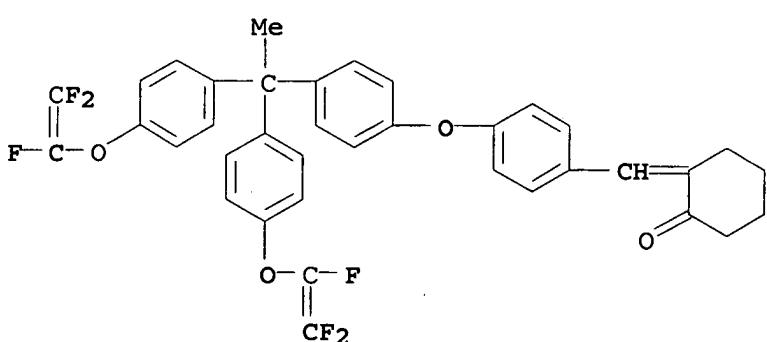
RN 161250-88-0 HCAPLUS  
 CN 2H-1-Benzopyran-2-one, 6-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy] - (9CI) (CA INDEX NAME)



RN 161250-89-1 HCAPLUS  
 CN 2H-1-Benzopyran-2-one, 7-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy] - (9CI) (CA INDEX NAME)



RN 161250-91-5 HCAPLUS  
 CN Cyclohexanone, 2-[[4-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy]phenyl]methylene] - (9CI) (CA INDEX NAME)



IC ICM G03F007-004  
 ICS C07C043-17; C08F016-32  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 Section cross-reference(s): 35  
 ST photodefinable polymer perfluorocyclobutane group photoresist  
 IT Resists  
 (photo-, photodefinable polymers containing perfluorocyclobutane  
 groups)  
 IT 161249-96-3 161249-98-5 161249-99-6 161250-00-6,  
 $\beta$ -(4-Hydroxybenzylidene)-4-(trifluoroethoxy)acetophenone  
 161250-01-7,  $\beta$ -(4-Acetylbenzylidene)-4-(trifluoroethoxy)acetophenone 161250-02-8,  $\beta$ -(4-Acetoxybenzylidene)-4-(trifluoroethoxy)acetophenone  
 161250-03-9,  $\beta$ -(4-Aminobenzylidene)-4-(trifluoroethoxy)acetophenone 161250-04-0,  $\beta$ -(4-Carboxybenzylidene)-4-(trifluoroethoxy)acetophenone 161250-05-1,  
 $\beta$ -(4-Isocyanatobenzylidene)-4-(trifluoroethoxy)acetophenone  
 161250-06-2,  $\beta$ -(4-Chlorocarboxybenzylidene)-4-(trifluoroethoxy)acetophenone 161250-07-3,  $\beta$ -(4-Carboxymethylbenzylidene)-4-(trifluoroethoxy)acetophenone  
 161250-08-4,  $\beta$ -(4-Carboxyethylbenzylidene)-4-(trifluoroethoxy)acetophenone 161250-09-5, 4-Hydroxy- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-10-8,  
4-Amino- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-11-9, 4-Carboxy- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-12-0, 4-Chlorocarboxy- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-13-1,  
4-Isocyanato- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-14-2, 4-Carboxymethyl- $\beta$ -(4-trifluoroethoxybenzylidene)acetophenone 161250-15-3 161250-16-4, 1-(4-Hydroxyphenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-17-5,  
2-(4-Hydroxyphenyl)-1-(4-trifluoroethoxyphenyl)-1-propene 161250-18-6, 1-(4-Aminophenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-19-7, 2-(4-Aminophenyl)-1-(4-trifluoroethoxyphenyl)-1-propene 161250-20-0,  
1-(4-Carboxyphenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-21-1, 2-(4-Carboxyphenyl)-1-(4-trifluoroethoxyphenyl)-1-propene 161250-22-2, 1-(4-Chlorocarboxyphenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-23-3,  
2-(4-Chlorocarboxyphenyl)-1-(4-trifluoroethoxyphenyl)-1-propene 161250-24-4, 1-(4-Isocyanatophenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-25-5, 2-(4-Isocyanatophenyl)-1-(4-trifluoroethoxyphenyl)-1-propene 161250-26-6,  
1-(4-Carboxymethylphenyl)-2-(4-trifluoroethoxyphenyl)-1-propene 161250-27-7 161250-28-8, 4-Hydroxy-4'-trifluoroethoxyloxystibene 161250-29-9, 4-Aminophenyl-4'-trifluoroethoxyloxystilbene  
161250-30-2, 4-Carboxyphenyl-4'-trifluoroethoxyloxystilbene 161250-31-3, 4-Isocyanato-4'-trifluoroethoxyloxystilbene 161250-32-4, 4-Carboxymethylphenyl-4'-trifluoroethoxyloxystilbene  
161250-33-5, 5-Hydroxy-8-trifluoroethoxyloxyphthalimide 161250-34-6, 1-(4-Hydroxyphenyl)-5-(4-trifluoroethoxyphenyl)-1,4-pentadien-3-one 161250-35-7, 1-(4-Aminophenyl)-5-(4-trifluoroethoxyphenyl)-1,4-pentadien-3-one 161250-36-8,  
1-(4-Carboxyphenyl)-5-(4-trifluoroethoxyphenyl)-1,4-pentadien-3-one 161250-37-9 161250-38-0, 1-(4-Isocyanatophenyl)-5-(4-trifluoroethoxyphenyl)-1,4-pentadien-3-one 161250-39-1,  
5-Hydroxy-8-trifluoroethoxyloxycoumarin 161250-40-4, 8-Hydroxy-5-trifluoroethoxyloxycoumarin 161250-41-5,

5-Amino-8-trifluoroethoxycoumarin 161250-42-6,  
 8-Amino-5-trifluoroethoxycoumarin 161250-43-7,  
 5-Isocyanato-8-trifluoroethoxycoumarin 161250-44-8,  
 8-Isocyanato-5-trifluoroethoxycoumarin 161250-45-9,  
 2-(4-Hydroxybenzylidene)-6-(4-trifluoroethoxybenzylidene)cyclohexanone 161250-46-0, 2-(4-Hydroxybenzylidene)-6-(4-trifluoroethoxybenzylidene)-4-methylcyclohexanone 161250-47-1,  
 2-(4-Aminobenzylidene)-6-(4-trifluoroethoxybenzylidene)cyclohexane 161250-48-2, 2-(4-Aminobenzylidene)-6-(4-trifluoroethoxybenzylidene)-4-methylcyclohexanone 161250-49-3,  
 2-(4-Carboxymethylbenzylidene)-6-(4-trifluoroethoxybenzylidene)cyclohexanone 161250-50-6, 2-(4-Carboxymethylbenzylidene)-6-(4-trifluoroethoxybenzylidene)-4-methylcyclohexanone 161250-51-7,  
 2-(4-Isocyanatobenzylidene)-5-(4-trifluoroethoxybenzylidene)cyclohexanone 161250-52-8, 2-(4-Isocyanatobenzylidene)-6-(4-trifluoroethoxybenzylidene)-4-methylcyclohexanone 161250-53-9  
 161250-54-0, 2-(4-Chlorocarboxybenzylidene)-6-(4-trifluoroethoxybenzylidene)-4-methylcyclohexanone 161250-55-1,  
 1-(4-Acroyloxyphenyl)-1,1-bis(4-trifluoroethoxyloxyphenyl)ethane 161250-56-2, 1-(4-Methacroyloxyphenyl)-1,1-bis(4-trifluoroethoxyloxyphenyl)ethane 161250-57-3, 1-(4-Acroylphenyl)-1,1-bis(4-trifluoroethoxyloxyphenyl)ethane 161250-58-4,  
 1-(4-Methacroylphenyl)-1,1-bis(4-trifluoroethoxyloxyphenyl)ethane 161250-59-5 161250-60-8 161250-61-9 161250-62-0,  
 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)- $\beta$ -(4-trifluoromethylbenzylidene)acetophenone 161250-63-1,  
 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)- $\beta$ -(4-carboxymethylbenzylidene)acetophenone 161250-64-2 161250-65-3,  
 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)- $\beta$ -(4-chlorobenzylidene)acetophenone 161250-66-4, 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)- $\beta$ -(4-fluorobenzylidene)acetophenone 161250-67-5, 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)- $\beta$ -(4-acetylbenzylidene)acetophenone 161250-68-6 161250-69-7,  
 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)styrene 161250-70-0,  
 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)-N-phenylmaleimide 161250-71-1, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-phenyl-1,4-pentadiene-3-one 161250-72-2, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-(dimethylamino)phenyl)-1,4-pentadiene-3-one 161250-73-3, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-methoxyphenyl)-1,4-pentadiene-3-one 161250-74-4, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-(carboxymethyl)phenyl)-1,4-pentadiene-3-one 161250-75-5, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-(carboxyethyl)phenyl)-1,4-pentadiene-3-one 161250-76-6, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-(trifluoromethyl)phenyl)-1,4-pentadiene-3-one 161250-77-7, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-nitrophenyl)-1,4-pentadiene-3-one 161250-78-8, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-chlorophenyl)-1,4-pentadiene-3-one 161250-79-9, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-fluorophenyl)-1,4-pentadiene-3-one 161250-80-2, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-acetophenyl)-1,4-pentadiene-3-one 161250-81-3, 1-(4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenyl)-5-(4-cyanophenyl)-1,4-pentadiene-3-one 161250-82-4, 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenylacetylene 161250-83-5, 4-(1,1-Bis(4-trifluoroethoxyloxyphenyl)ethyl)phenylbuta-1,3-diyne

161250-84-6, 4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)phenylhexa-  
 1,3,5-triyne 161250-85-7, 4-(1,1-Bis(4-trifluoroethoxyphenyl)eth-  
 yl)phenylocta-1,3,5,7-tetrayne 161250-86-8, 4-(1,1-Bis(4-  
 trifluoroethoxyphenyl)ethyl)phenyl-1,3,5,7,9-pentayne  
 161250-87-9, 6-(4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)p-  
 henoxy)naphthoquinone 161250-88-0, 6-(4-(1,1-Bis(4-  
 trifluoroethoxyphenyl)ethyl)phenoxy)coumarin 161250-89-1  
 , 7-(4-(1,1-Bis(4-trifluoroethoxyphenyl)ethyl)phenoxy)coumarin  
 161250-90-4, 2-(4-(1,1-Bis(trifluoroethoxyphenyl)ethyl)benzylidene  
 )cyclohexanone 161250-91-5, 2-(4-(4-(1,1-  
 Bis(trifluoroethoxyphenyl)ethyl)phenoxy)benzylidene)cyclohexanone  
 161250-92-6, 1-Acroyloxy-2-(4-trifluoroethoxy)benzoyloxyethane  
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 4-Dimethylaminophenyl-4'-trifluoroethoxyloystilbene 161251-61-2,  
 4-Carboxyethylphenyl-4'-trifluoroethoxyloystilbene 161251-62-3,  
 4-Nitro-4'-trifluoroethoxyloystilbene 161251-63-4,  
 4-Chloro-4'-trifluoroethoxyloystilbene 161251-64-5,  
 4-Fluoro-4'-trifluoroethoxyloystilbene 161251-65-6,  
 4-Cyano-4'-trifluoroethoxyloystilbene 161251-66-7,  
 4-Acetyl-4'-trifluoroethoxyloystilbene 161251-67-8,  
 4-Trifluoromethyl-4'-trifluoroethoxyloystilbene 161251-68-9  
 161251-69-0 161251-70-3 161251-71-4 161251-72-5 161251-73-6  
 161251-74-7 161251-75-8 161251-76-9 161251-77-0 161251-78-1,  
 1,1-Bis(4-trifluoroethoxyphenyl)-1-(4-(5-(2-furanyl)-2,4-pentadiene-  
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 β-(benzylidene)acetophenone 161251-80-5, 3,5-  
 Bis(trifluoroethoxy)-β-(4'-methoxybenzylidene)acetophenone  
 161251-81-6, 3,5-Bis(trifluoroethoxy)-β-(4'-  
 dimethylaminobenzylidene)acetophenone 161251-82-7,  
 3,5-Bis(trifluoroethoxy)-β-(4'-cyanobenzylidene)acetophenone  
 161251-83-8, 3,5-Bis(trifluoroethoxy)-β-(4'-  
 nitrobenzylidene)acetophenone 161251-84-9 161251-85-0  
 161251-86-1 161251-87-2 161251-88-3 161251-89-4 161251-90-7  
 161251-91-8 161251-92-9 161251-93-0 161251-94-1 161251-95-2  
 161251-96-3 161251-97-4, 2,7-Bis(3-phenyl-2-propene-1-onyl)-9,9-  
 bis(4-trifluoroethoxyphenyl)fluorene 161251-98-5 161251-99-6,

2,7-Bis(3-(2-methoxyphenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-00-2, 2,7-Bis(3-(4-dimethylaminophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-01-3, 2,7-Bis(3-(4-cyanophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-02-4, 2,7-Bis(3-(4-nitrophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-03-5 161252-04-6 161252-05-7, 2-(5-(2-Methoxyphenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-06-8 161252-07-9, 2,7-Bis(5-(4-cyanophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-08-0, 2,7-Bis(5-(4-nitrophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-09-1, 2,7-Bis(5-(2-dimethylaminophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethoxyphenyl)fluorene 161252-10-4 161252-11-5 161252-12-6 161252-13-7 161252-14-8 161252-15-9 161252-16-0 161252-17-1 161252-19-3 161252-20-6 161252-21-7 161252-22-8  
(monomer for photodefinable polymer)

IT 161252-23-9P 161252-25-1P 161252-26-2P 161252-28-4P  
161252-29-5P 161252-30-8P 161252-31-9P  
(photodefinable polymer for photoresist)

IT 134151-69-2P 134151-70-5P 134151-75-0P 134151-76-1P  
161252-24-0P 161252-27-3P  
(photodefinable polymer for photoresist)

L61 ANSWER 28 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:370781 HCPLUS

DOCUMENT NUMBER: 122:201275

TITLE: Positive-working photoresist  
compositions useful for making semiconductor  
devices

INVENTOR(S): Sato, Kenichiro; Aoso, Toshiaki; Kawabe, Yasumasa;  
Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

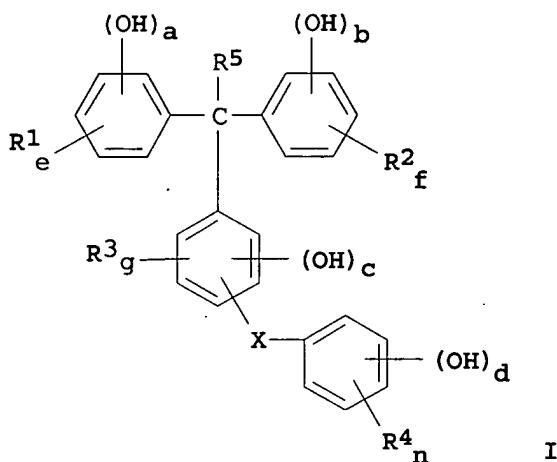
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06308724	A	19941104	JP 1993-93199 -->	19930420
PRIORITY APPLN. INFO.:			JP 1993-93199 -->	19930420

OTHER SOURCE(S): MARPAT 122:201275

ED Entered STN: 23 Feb 1995

GI

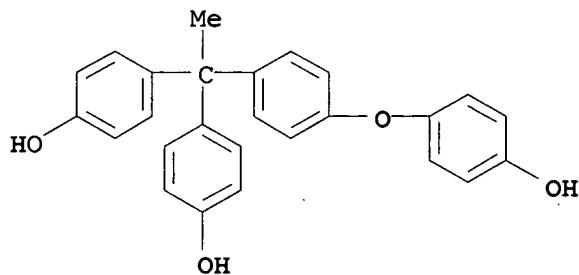


AB The title photoresist compns. contain an alkali-soluble resin, a quinonediazide compound, and a polyhydric compound I [X = O, S, SO, SO<sub>2</sub>, SO<sub>3</sub>, SO<sub>2</sub>NH, NH, CO, CO<sub>2</sub>, CS, CONH; R1-4 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO<sub>2</sub>, CN; R5 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO<sub>2</sub>, CN; a, b, d = 0-5 ( $\geq$ 1 of them should not be 0); c, g = 0-4; e, f, h = 0-5]. The compns., useful for making semiconductor devices, provide high resolution resist patterns with good development and thermal resistance. Thus, a resist comprised m-cresol-p-cresol-HCHO novolak resin, 1,2-naphthoquinonediazido-5-sulfonate of 2,3,4-trihydroxybenzophenone, and (p-HOC<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CMe-(p-C<sub>6</sub>H<sub>4</sub>)O(C<sub>6</sub>H<sub>4</sub>OH-p).

IT 161495-94-9P  
(photoresist composition containing quinonediazide compound and polyhydric compound)

RN 161495-94-9 HCPLUS

CN Phenol, 4,4'-(1-[4-(4-hydroxyphenoxy)phenyl]ethylidene)bis- (9CI) (CA INDEX NAME)



IC ICM G03F007-022  
ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76

ST quinonediazide compd pos working photoresist; polyhydric triphenylmethane compd photoresist

IT Phenolic resins, preparation

(photoresist composition containing quinonediazide compound and polyhydric compound)

IT Resist

(photo-, photoresist composition containing quinonediazide compound and polyhydric compound)

IT 27029-76-1P 68510-93-0P 107761-81-9P, 2,3,4,4'-  
Tetrahydroxybenzophenone 1,2-naphthoquinonediazide-5-sulfonic acid  
ester 161495-94-9P 161495-95-0P 161717-38-0P  
(photoresist composition containing quinonediazide compound and polyhydric compound)

L61 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:370780 HCAPLUS

DOCUMENT NUMBER: 122:201274

TITLE: Positive-working photoresist  
compositions useful for making semiconductor  
devices

INVENTOR(S): Sato, Kenichiro; Aoso, Toshiaki; Kawabe, Yasumasa;  
Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

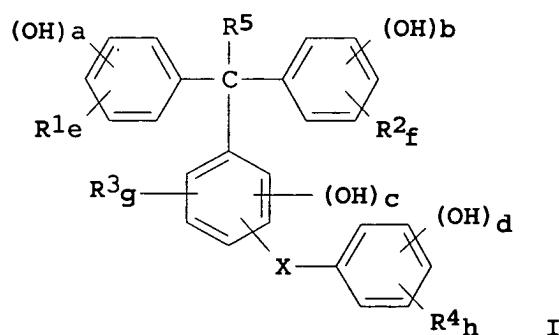
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06308723	A	19941104	JP 1993-93198	19930420 <--
PRIORITY APPLN. INFO.:			JP 1993-93198	19930420 <--

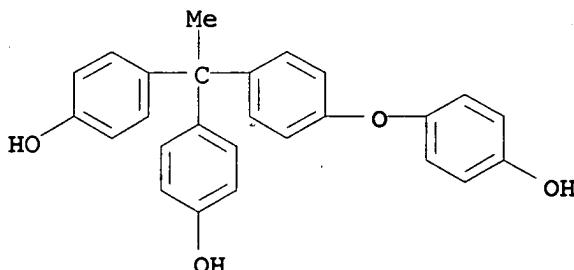
ED Entered STN: 23 Feb 1995  
GI



AB The title photoresist compns. contain an alkali-soluble resin and 1,2-naphthoquinonediazido-5-(and/or 4-)sulfonic acid ester of a polyhydroxy compound I [X = O, S, SO, SO<sub>2</sub>, SO<sub>3</sub>, SO<sub>2</sub>NH, NH, CO, CO<sub>2</sub>, CS, CONH; R1-4 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO<sub>2</sub>, CN; R5 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO<sub>2</sub>, CN; a, b, d = 0-5]

( $\geq 1$  of them should not be O); c, g = 0-4; e, f, h = 0-5]. The compns., useful for making semiconductor devices, provide high resolution resist patterns with good profile, develop-ability, and thermal resistance. Thus, a resist comprises m-cresol-p-cresol-HCHO novolak resin and 1,2-naphthoquinonediazido-5-sulfonate of  $(p-HOC_6H_4)_2CMe-(p-C_6H_4)O(C_6H_4OH-p)$ .

IT 161495-94-9  
 (esterification with naphthoquinonediazidesulfonic acid)  
 RN 161495-94-9 HCAPLUS  
 CN Phenol, 4,4'-(1-[4-(4-hydroxyphenoxy)phenyl]ethylidene)bis- (9CI) (CA INDEX NAME)



IC ICM G03F007-022  
 ICS H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST quinonediazidesulfonate pos working photoresist; polyhydroxy compd quinonediazidesulfonate photoresist  
 IT Phenolic resins, uses  
 (novolak, pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)  
 IT Resists  
 (photo-, pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)  
 IT 161495-94-9 161495-95-0 161495-96-1  
 (esterification with naphthoquinonediazidesulfonic acid)  
 IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer 161817-92-1P  
 161817-93-2P 161817-94-3P  
 (pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)

L61 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:294852 HCAPLUS  
 DOCUMENT NUMBER: 122:188507  
 TITLE: Thermally stable aromatic polycarbonates  
 INVENTOR(S): Totani, Yoshuki; Hirao, Genichi; Ito, Tomomichi;  
 Nakatsuka, Masakatsu; Yamaguchi, Teruhiro  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06287293	A	19941011	JP 1993-80432	19930407
			<--	
JP 3218117	B2	20011015		
PRIORITY APPLN. INFO.:			JP 1993-80432	19930407
			<--	

ED Entered STN: 14 Jan 1995

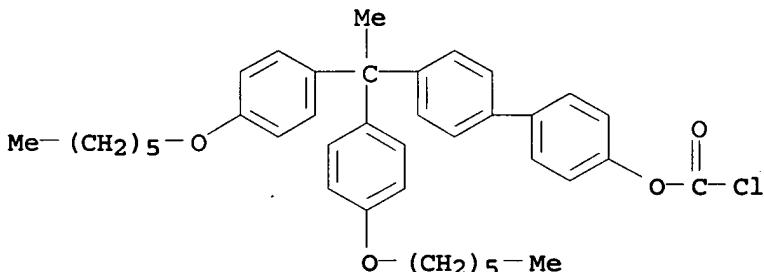
AB Title polycarbonates with good flowability and heat **resistance** are terminated by (R1OZ1)(R2OZ2)(R3)CZ3 (R1, R2 = alkyl; R3 = alkyl, aryl, aralkyl; Z1-Z3 = divalent aromatic residue) groups. Thus, 4.0 mol bisphenol A and 0.1376 mol 4-[1',1'-bis(4"-ethoxyphenyl)ethyl]phenol were stirred in CH<sub>2</sub>Cl<sub>2</sub>/H<sub>2</sub>O with 5.0 mol COCl<sub>2</sub> to obtain a polymer with Mn 20,700, Mw 50,900, melt index (2.16 kg, 280°) 16 g/10 min, and Tg 145°.

IT 161639-75-4

(end-capping agent; preparation of thermally stable aromatic polycarbonates with good flowability)

RN 161639-75-4 HCPLUS

CN Carbonochloridic acid, 4'-(1,1-bis[4-(hexyloxy)phenyl]ethyl)[1,1'-biphenyl]-4-yl ester (CA INDEX NAME)



IC ICM C08G064-14  
ICS C08G064-20

CC 35-5 (Chemistry of Synthetic High Polymers)

ST arom polycarbonate heat **resistance**; melt flowability arom polycarbonate; end capping agent arom polycarbonate; terminated arom polycarbonate prepn

IT 161639-71-0 161639-72-1 161639-73-2 161639-74-3

161639-75-4 161639-76-5

(end-capping agent; preparation of thermally stable aromatic polycarbonates with good flowability)

L61 ANSWER 31 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:280353 HCPLUS

DOCUMENT NUMBER: 122:266816

TITLE: Molecular design of epoxy resins for microelectronics packaging

AUTHOR(S): Kaji, Masashi

CORPORATE SOURCE: Res. Development Lab., Nippon Steel Chemical Co., Ltd., Fukuoka, 804, Japan

SOURCE: ACS Symposium Series (1994), 579(Polymeric Materials for Microelectronic Applications), 220-33

CODEN: ACSMC8; ISSN: 0097-6156

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

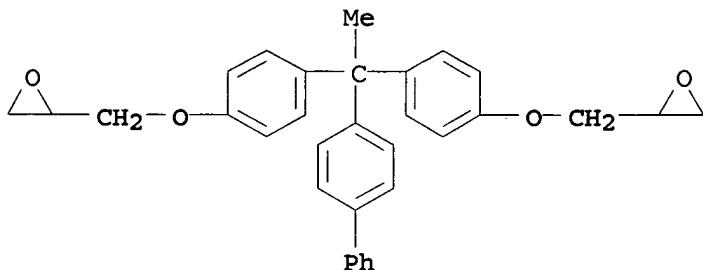
ED Entered STN: 07 Jan 1995

AB The relations between the structures and properties of epoxy resins were investigated to achieve improved toughness, low moisture absorption, increased heat resistance, low thermal expansion, and decreased viscosity of epoxy resins for high filler loading. Introduction of a rigid group, such as 4,4'-biphenyl or 2,6-naphthalene moiety, was an effective way to improve fracture toughness, and the naphthalene-based resins were effective for lowering moisture absorption, increasing glass transition temperature, and lowering thermal expansion. Several epoxy resins of the bisphenol-type with lower melting viscosity were synthesized and used as molding compds. for IC packaging. Crack resistance of the packages using these resins was markedly superior due to high filler loading due to their lower viscosity.

IT 162753-99-3D, reaction products with phenolic novolaks (thermal and mech. properties of epoxy resins for I.C. packages as a function of structure)

RN 162753-99-3 HCPLUS

CN Oxirane, 2,2'-[[(1-[1,1'-biphenyl]-4-ylethylidene)bis(4,1-phenyleneoxymethylene)]bis- (CA INDEX NAME)



CC 37-5 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 76

IT 1675-54-3D, reaction products with phenolic novolaks 2095-03-6D, reaction products with phenolic novolaks 2461-46-3D, 4,4'-Biphenyldiol diglycidyl ether, reaction products with phenolic novolaks 2994-63-0D, 4,4'-Hexafluoroisopropylidenediphenol diglycidyl ether, reaction products with phenolic novolaks 3878-43-1D, Diphenylsulfone diglycidyl ether, reaction products with phenolic novolaks 5145-95-9D, reaction products with phenolic novolaks 7328-97-4D, 1,1,2,2-Tetra(p-hydroxyphenyl)ethane tetraglycidyl ether, reaction products with phenolic novolaks 13368-56-4D, 1,1-Bis(4-hydroxyphenyl)-1-phenylethane diglycidyl ether, reaction products with phenolic novolaks 16558-06-8D, 4,4'-Thiobisphenol diglycidyl ether, reaction products with phenolic novolaks 19389-73-2D, 4,4'-Oxybisphenol diglycidyl ether, reaction products with phenolic novolaks 25302-12-9D, Formaldehyde-2-naphthol copolymer, reaction products with epichlorohydrin and phenolic novolaks 25359-91-5D, Formaldehyde-1-naphthol copolymer, reaction products with epichlorohydrin and phenolic novolaks 26564-94-3D, reaction products with phenolic novolaks 43224-82-4D, Tris(4-hydroxyphenyl)methane triglycidyl ether, reaction products with phenolic novolaks 47758-37-2D, reaction products with phenolic novolaks 107530-04-1D, 1,6-Naphthalenediol, polymer with formaldehyde, reaction products with epichlorohydrin and phenolic novolaks 113601-85-7D, reaction products with epichlorohydrin and phenolic novolaks 113601-86-8D, 1,4-Benzenedimethanol, polymer with 2-naphthalenol, reaction products with epichlorohydrin and phenolic

novolaks 134118-68-6D, 1-Naphthalenol, polymer with 2-hydroxy-5-methyl-1,3-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 134118-69-7D, 2-Naphthalenol, polymer with 2-hydroxy-5-methyl-1,3-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-74-8D, 1,6-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-75-9D, 1,7-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-76-0D, 2,7-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 158626-38-1D, reaction products with phenolic novolaks 162753-98-2D, reaction products with phenolic novolaks 162754-00-9D, reaction products with epichlorohydrin and phenolic novolaks

(thermal and mech. properties of epoxy resins for I.C. packages as a function of structure)

L61 ANSWER 32 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:257495 HCPLUS

DOCUMENT NUMBER: 120:257495

TITLE: Aromatic chloroformate compound for thermal recording color developer

INVENTOR(S): Hirao, Genichi; Totani, Yoshuki; Ito, Tomomichi; Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

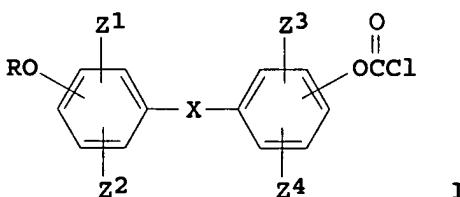
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05306260	A	19931119	JP 1993-5608	19930118
JP 3361560	B2	20030107		<--
PRIORITY APPLN. INFO.:			JP 1992-11905	A1 19920127
			<--	

OTHER SOURCE(S): MARPAT 120:257495

ED Entered STN: 14 May 1994

GI



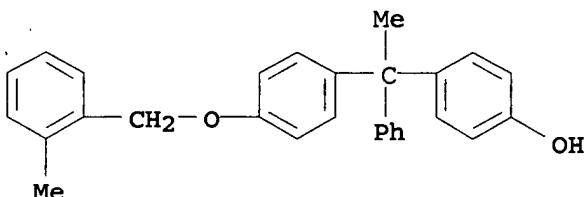
AB The compound has a general formula I (R = aralkyl; X = C1-14 alkylene, O, S; Z1-4 = H, C1-4 alkyl, halo). I is an useful intermediate for organic industrial compds. Na 4-[4'-(4-benzyloxy)cumylphenyloxycarbonyla

mino]benzoate prepared from I was used as a thermal recording color developer.

IT 152430-92-7  
(chlorocarbonylation of)

RN 152430-92-7 HCPLUS

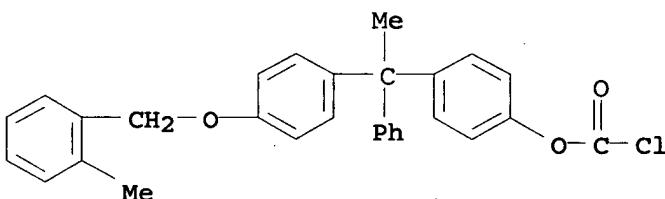
CN Phenol, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl]- (CA INDEX NAME)



IT 154421-27-9P  
(preparation of, precursor for organic industrial compds.)

RN 154421-27-9 HCPLUS

CN Carbonochloridic acid, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl]phenyl ester (CA INDEX NAME)



IC ICM C07C069-96  
ICS C08G064-28

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25

IT 1988-89-2 42781-88-4 152430-84-7 152430-85-8 152430-86-9  
152430-87-0 152430-92-7 154421-31-5 154421-32-6  
154421-33-7 154421-34-8 154421-35-9 154421-36-0 154421-37-1  
154421-38-2

(chlorocarbonylation of)

IT 154421-17-7P 154421-18-8P 154421-19-9P 154421-20-2P  
154421-21-3P 154421-22-4P 154421-23-5P 154421-24-6P  
154421-25-7P 154421-26-8P 154421-27-9P 154421-28-0P  
154421-29-1P 154421-30-4P

(preparation of, precursor for organic industrial compds.)

L61 ANSWER 33 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:106532 HCPLUS

DOCUMENT NUMBER: 120:106532

TITLE: Preparation of phenols

INVENTOR(S): Ito, Tomomichi; Hirao, Genichi; Totani, Yoshuki;  
Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

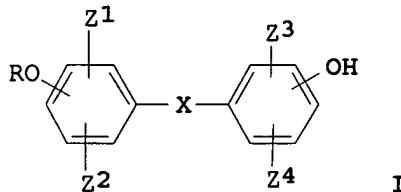
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05221911	A	19930831	JP 1992-312037	19921120
PRIORITY APPLN. INFO.:			JP 1991-322916	A1 19911206
			<--	

OTHER SOURCE(S): MARPAT 120:106532  
 ED Entered STN: 05 Mar 1994  
 GI

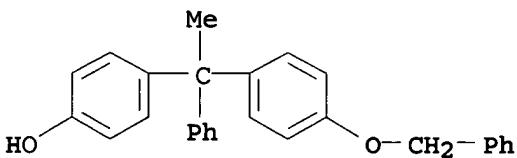


AB Phenols I (R = aralkyl; X = C5-14 cycloalkylidene, 1,1-ethyliidene, 1,2-ethylene, 1,1-propylidene, 1,1- or 2,2-butyliidene, 4-methyl-2,2-pentylidene, phenylmethylene, 1-phenyl-1,1-ethyliidene; Z1-4 = H, halo, C1-4 alkyl), useful as organic functional materials such as materials for heat-sensitive recording papers, are prepared. A solution of 50 g 1,1-bis(4'-hydroxyphenyl)cyclohexane and NaOH in H2O-Me2CHOH was treated with 32 g PhCH2Br at 80-85° for 3 h to give 30 g 1-(4'-benzyloxyphenyl)-1-(4''-hydroxyphenyl)cyclohexane. Heat-sensitive recording paper was prepared using 2-[4'-(4-chlorobenzyloxy)phenyl]-2-(4''-hydroxyphenyl)butane as an electron acceptor to show rapid coloration at low temperature.

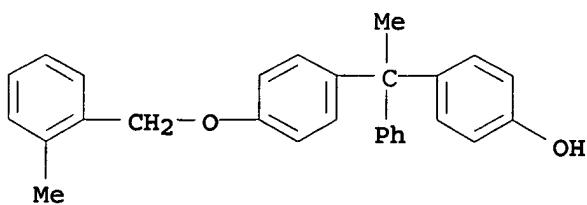
IT 152430-91-6P 152430-92-7P  
 (preparation of, as organic functional material)

RN 152430-91-6 HCAPLUS

CN Phenol, 4-[1-phenyl-1-[4-(phenylmethoxy)phenyl]ethyl] - (CA INDEX NAME)



RN 152430-92-7 HCAPLUS  
 CN Phenol, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl] - (CA INDEX NAME)



IC ICM C07C043-23  
ICS B41M005-30

ICA A01N031-16

CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 74

IT 52252-99-0P 152430-83-6P 152430-84-7P 152430-85-8P  
152430-86-9P 152430-87-0P 152430-88-1P 152430-89-2P  
152430-90-5P 152430-91-6P 152430-92-7P

(preparation of, as organic functional material)

L61 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:215014 HCAPLUS

DOCUMENT NUMBER: 118:215014

TITLE: Radiation-curable aromatic urethane  
(meth)acrylates

INVENTOR(S): Kinoshita, Masayuki; Ishikawa, Hidenori

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

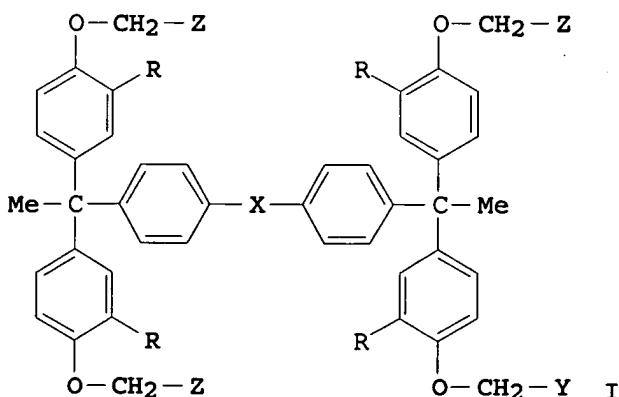
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04253716	A	19920909	JP 1991-14318	19910205
			<--	
PRIORITY APPLN. INFO.:			JP 1991-14318	19910205
			<--	

ED Entered STN: 29 May 1993

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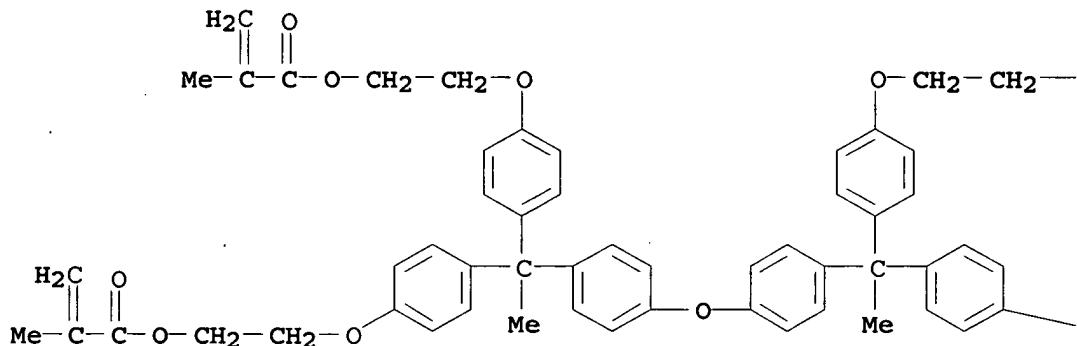
AB The title compds. I [R = H, Me; X = O, CH<sub>2</sub>; Y = CH(OCONHX1)CH<sub>2</sub>OOCOCR:CHR1; R1 = H, Me, CN, halo; Z = Y, CH(OH)CH<sub>2</sub>OOCOCR:CHR1; X1 = (meth)acryloyl group-containing residue] are useful for coatings, inks, etc. Thus, reacting 2-hydroxyethyl acrylate-TDI adduct (1:1) with a tetrafunctional hydroxy compound (prepared by condensation of 4,4'-diacetyldiphenyl ether with phenol, followed by reaction with epichlorohydrin and then with acrylic acid) gave a product, which was photopolymd. to give a coating with good heat, water, and alkali **resistance**.

IT 147363-81-3DP, reaction products with hydroxyethyl (meth)acrylate-diisocyanate adducts, polymers (preparation of, as photocured heat- and water- and alkali-  
**resistant** coatings)

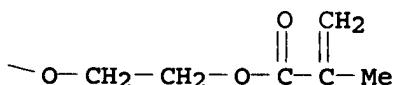
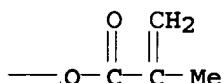
RN 147363-81-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis[4,1-phenyleneethylidenebis(4,1-phenyleneoxy-2,1-ethanediyl)] ester (9CI) (CA INDEX NAME)

## PAGE 1-A



## PAGE 1-B



IC ICM C08F299-02  
 ICA C09D171-00  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST photocured urethane acrylate coating; diphenylethane urethane acrylate coating; diphenyl ether urethane acrylate coating; alkali **resistance** coating urethane acrylate; heat **resistance**

coating urethane acrylate; water resistance coating urethane acrylate

IT Coating materials  
(photocurable, urethane (meth)acrylate polymers, with good heat- and water- and alkali-resistance)

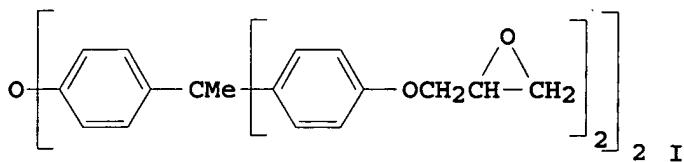
IT 115-77-5DP, reaction products with isophorone diisocyanate and di-Ph ether phenol derivs., polymers 4098-71-9DP, reaction products with pentaerythritol and di-Ph ether phenol derivs., polymers 35913-04-3DP, reaction products with di-Ph ether phenol derivs., polymers 54554-39-1DP, reaction products with di-Ph ether phenol derivs., polymers 147363-81-3DP, reaction products with hydroxyethyl (meth)acrylate-diisocyanate adducts, polymers (preparation of, as photocured heat- and water- and alkali-resistant coatings)

L61 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:193720 HCAPLUS  
DOCUMENT NUMBER: 118:193720  
TITLE: Radiation-curable aromatic polyepoxide derivatives containing acrylate or similar groups  
INVENTOR(S): Kinoshita, Masayuki; Ishikawa, Hidenori  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04239011	A	19920826	JP 1991-1528 <--	19910110
PRIORITY APPLN. INFO.:			JP 1991-1528 <--	19910110

ED Entered STN: 14 May 1993  
GI



AB The title derivs. are prepared from a tetraepoxide such as I (i.e., prepared from a reaction product of phenol and 4,4'diacetyldiphenyl ether) and are useful for coatings, etc. Heating 874 g I with 288 g acrylic acid gave an acrylate group-containing reaction product (epoxide equivalent weight  $\geq 15,000$ ) which gave a photocured coating with good heat, water, and alkali resistance.

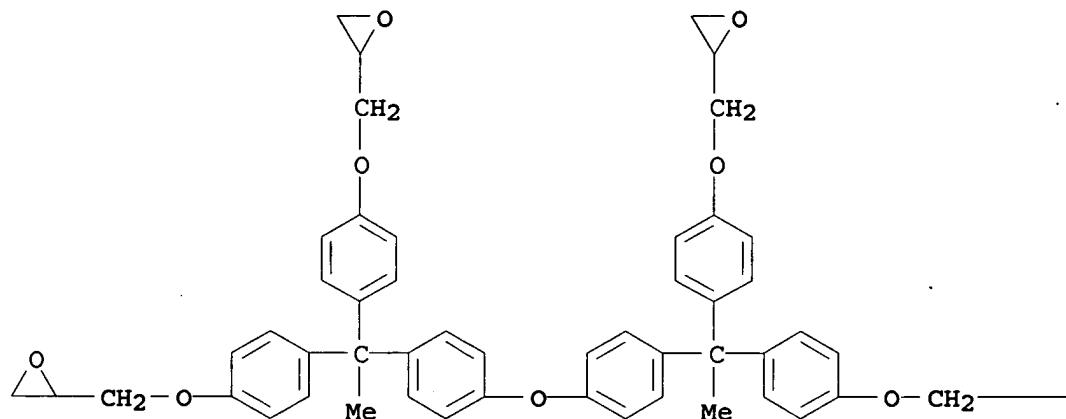
IT 140365-06-6DP, reaction products with acrylic acid, polymers (preparation of photocured, heat- and alkali-resistant)

RN 140365-06-6 HCAPLUS

CN Oxirane, 2,2',2'',2'''- [oxybis[4,1-phenyleneethylidynebis(4,1-

phenyleneoxymethylene)] tetrakis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



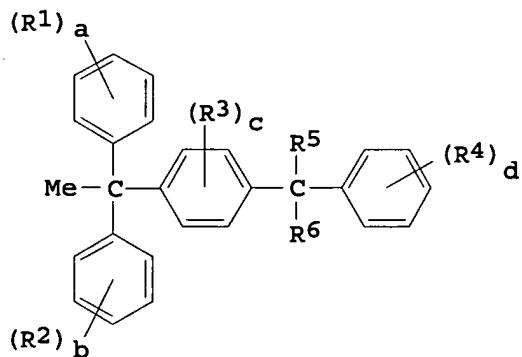
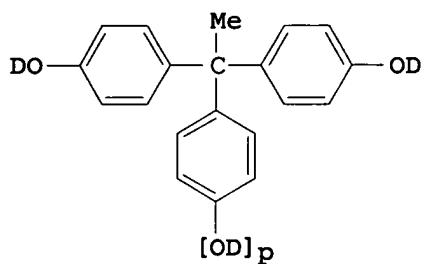
IC ICM C08F299-02  
 ICS C08F299-00; C08G059-14  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST photocuring epoxy acrylate; acetylphenyl ether phenol epoxy acrylate; alkali resistance coating epoxy acrylate; crosslinking UV arom epoxy acrylate; polymn UV arom epoxy acrylate  
 IT Epoxy resins, compounds  
     (acrylates, preparation of photocured, heat- and alkali-resistant)  
 IT Crosslinking  
     (photochem., epoxy acrylates for, as heat- and alkali-resistant coatings)  
 IT 79-10-7DP, Acrylic acid, esters with aromatic tetraepoxides, polymers  
 140365-06-6DP, reaction products with acrylic acid, polymers  
     (preparation of photocured, heat- and alkali-resistant)

L61 ANSWER 36 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1992:540649 HCPLUS

DOCUMENT NUMBER: 117:140649  
 TITLE: Radiation-sensitive resin composition  
 INVENTOR(S): Kajita, Toru; Miura, Takao; Yomoto, Yoshiji;  
 Okuda, Chozo  
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 20 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 443820	A2	19910828	EP 1991-301322 <--	19910220
EP 443820	A3	19911127		
EP 443820	B1	19980909		
R: DE, FR, GB, IT, NL				
US 5238775	A	19930824	US 1991-656857 <--	19910219
JP 04211254	A	19920803	JP 1991-47693 <--	19910220
JP 2927013	B2	19990728		
JP 04211255	A	19920803	JP 1991-47694 <--	19910220
JP 2927014	B2	19990728		
JP 10133369	A	19980522	JP 1997-347007 <--	19971201
JP 2921519	B2	19990719		
JP 10142784	A	19980529	JP 1997-347006 <--	19971201
JP 2921518	B2	19990719		
JP 10147561	A	19980602	JP 1997-347005 <--	19971201
JP 2888236	B2	19990510		
PRIORITY APPLN. INFO.:			JP 1990-39409 <--	A 19900220
			JP 1991-47693 <--	A3 19910220
			JP 1991-47694 <--	A3 19910220

ED Entered STN: 04 Oct 1992  
 GI

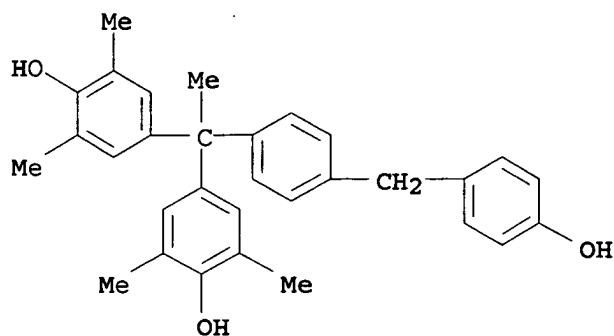


AB The title composition contains an alkali-soluble resin containing  $\geq 1$  of I and II [D = H, 1,2-quinone diazide; p = 0, 1; R1-R4 = alkyl, aryl, OD;  $\geq 1$  of R1-R4 is OD; R5, R6 = H, alkyl; a, b, d = 0-5,  $>1$  of them is  $>0$ ; c = 0-4]. The title composition is suitable for use as a pos.-type photoresist which has such excellent developability as to inhibit effectively the generation of scum in the formation of a pattern, has high sensitivity, and is excellent in heat resistance.

IT 142996-08-5 142996-08-5D, quinonediazidesulfonates  
 142996-09-6 142996-09-6D, quinonediazidesulfonates  
 142996-10-9 142996-10-9D, quinonediazidesulfonates  
 142996-11-0 142996-11-0D, quinonediazidesulfonates  
 142996-12-1 142996-12-1D, quinonediazidesulfonates  
 143016-47-1 143016-47-1D, quinonediazidesulfonates  
 143016-48-2 143016-48-2D, quinonediazidesulfonates  
 (photoresist compns. containing)

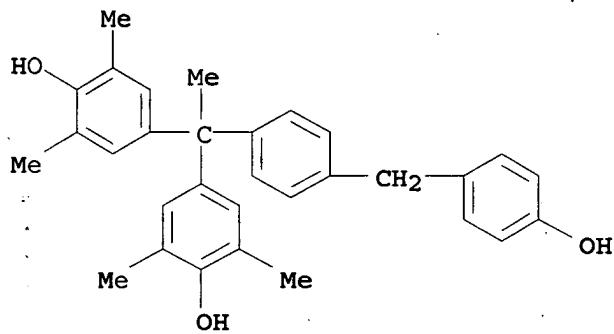
RN 142996-08-5 HCPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[2,6-dimethyl- (CA INDEX NAME)]



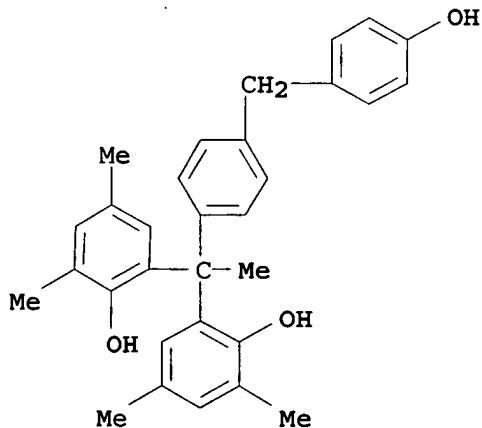
RN 142996-08-5 HCPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[2,6-dimethyl- (CA INDEX NAME)]



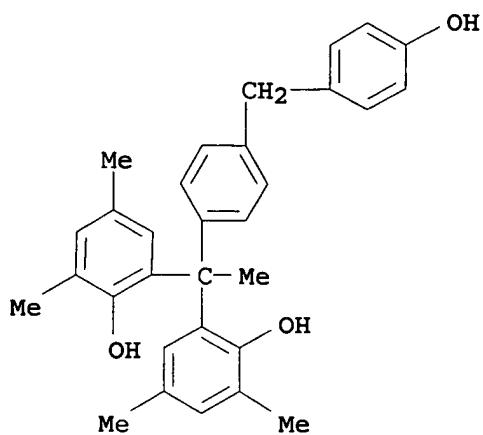
RN 142996-09-6 HCPLUS

CN Phenol, 2,2'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[4,6-dimethyl- (CA INDEX NAME)]



RN 142996-09-6 HCPLUS

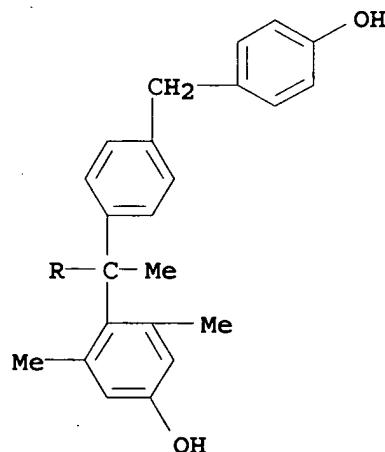
CN Phenol, 2,2'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[4,6-dimethyl- (CA INDEX NAME)]



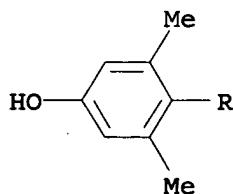
RN 142996-10-9 HCPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[3,5-dimethyl- (CA INDEX NAME)]

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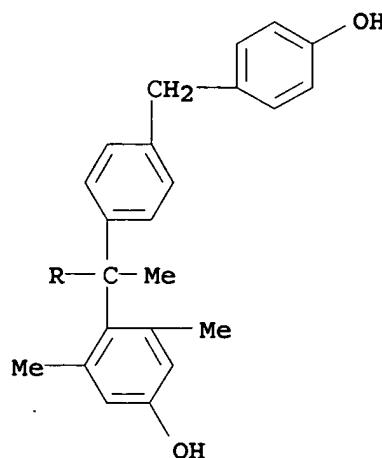
PAGE 2-A



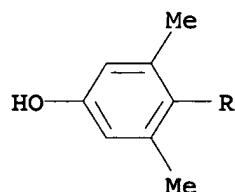
RN 142996-10-9 HCPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis[3,5-dimethyl- (CA INDEX NAME)]

PAGE 1-A

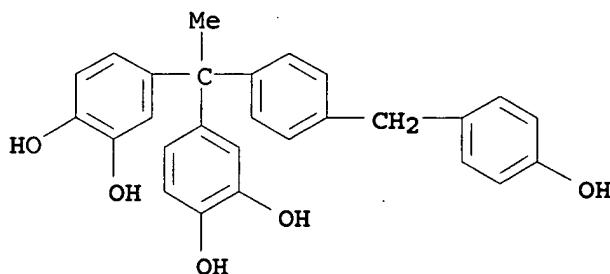


PAGE 2-A



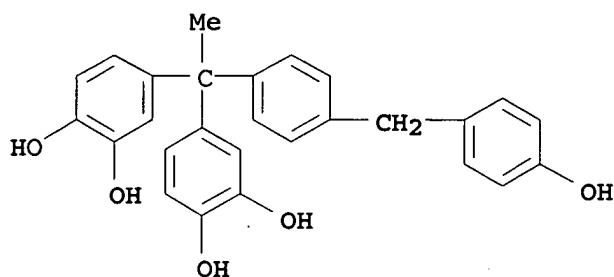
RN 142996-11-0 HCPLUS

CN 1,2-Benzenediol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis- (CA INDEX NAME)



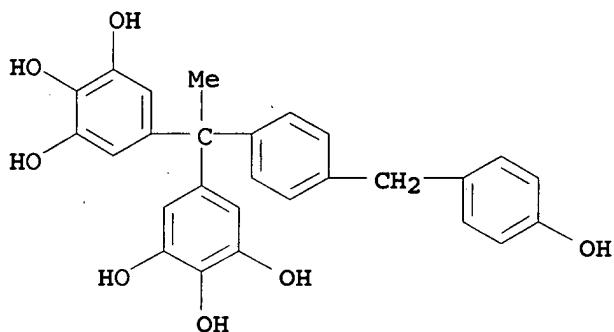
RN 142996-11-0 HCPLUS

CN 1,2-Benzenediol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis- (CA INDEX NAME)



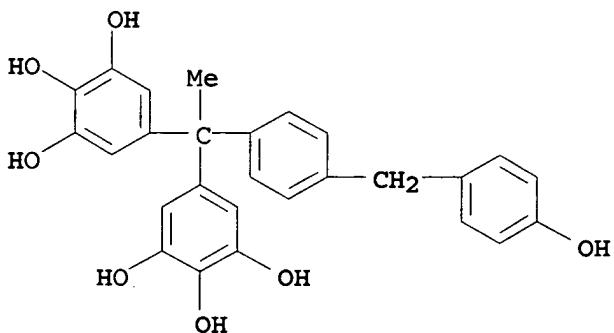
RN 142996-12-1 HCAPLUS

CN 1,2,3-Benzenetriol, 5,5'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis- (CA INDEX NAME)



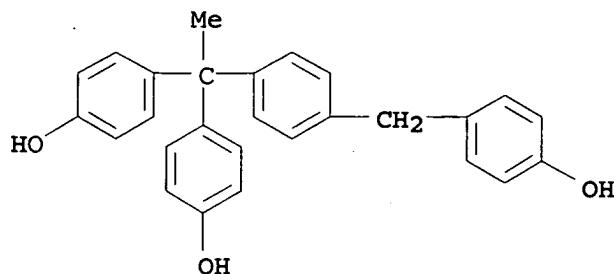
RN 142996-12-1 HCAPLUS

CN 1,2,3-Benzenetriol, 5,5'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis- (CA INDEX NAME)



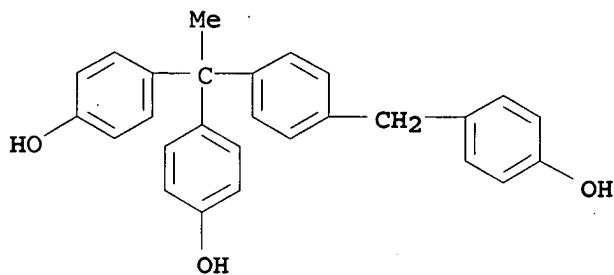
RN 143016-47-1 HCAPLUS

CN Phenol, 4,4'-(1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene)bis-(9CI) (CA INDEX NAME)



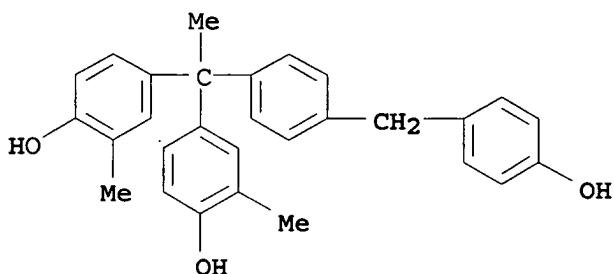
RN 143016-47-1 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis-(9CI) (CA INDEX NAME)



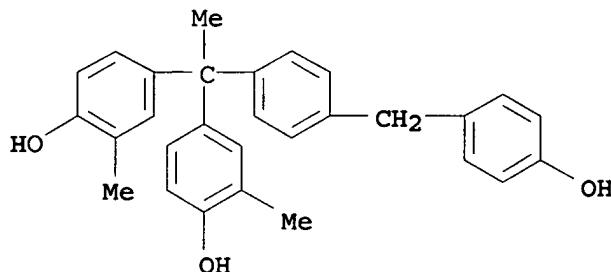
RN 143016-48-2 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[2-methyl- (CA INDEX NAME)



RN 143016-48-2 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[2-methyl- (CA INDEX NAME)



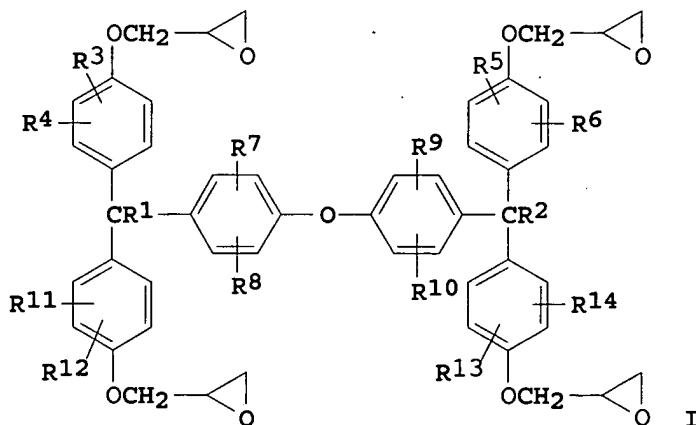
IC ICM G03F007-022  
 ICS C07C039-15  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST photoresist quinonediazide compd; phenolic compd  
 photoresist; scum prevention photoresist  
 IT Resists  
 (photo-, containing phenolic or ester compds. for scum prevention)  
 IT 4081-02-1 27955-94-8 110726-28-8 110726-28-8D,  
 quinonediazidesulfonates 142996-08-5 142996-08-5D,  
 quinonediazidesulfonates 142996-09-6 142996-09-6D,  
 quinonediazidesulfonates 142996-10-9 142996-10-9D,  
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 quinonediazidesulfonates 142996-14-3 142996-14-3D,  
 quinonediazidesulfonates 142996-15-4 142996-15-4D,  
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 quinonediazidesulfonates 142996-17-6 142996-17-6D,  
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 quinonediazidesulfonates 143016-47-1 143016-47-1D,  
 quinonediazidesulfonates 143016-48-2 143016-48-2D,  
 quinonediazidesulfonates  
 (photoresist compns. containing)  
 IT 25086-36-6P 27029-76-1P 62655-78-1P 103735-35-9P 137902-98-8P  
 138636-85-8P 143178-45-4P 143179-02-6P  
 (preparation and use of, in photoresist compns.)

L61 ANSWER 37 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1992:175450 HCPLUS  
 DOCUMENT NUMBER: 116:175450  
 TITLE: Epoxy resin potting compositions for semiconductor  
 INVENTOR(S): Mogi, Naoki; Naruse, Shigeru  
 PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03195723	A	19910827	JP 1989-332944	19891225
JP 2744499	B2	19980428		<--
PRIORITY APPLN. INFO.:			JP 1989-332944	19891225

ED    Entered STN: 03 May 1992  
 GI

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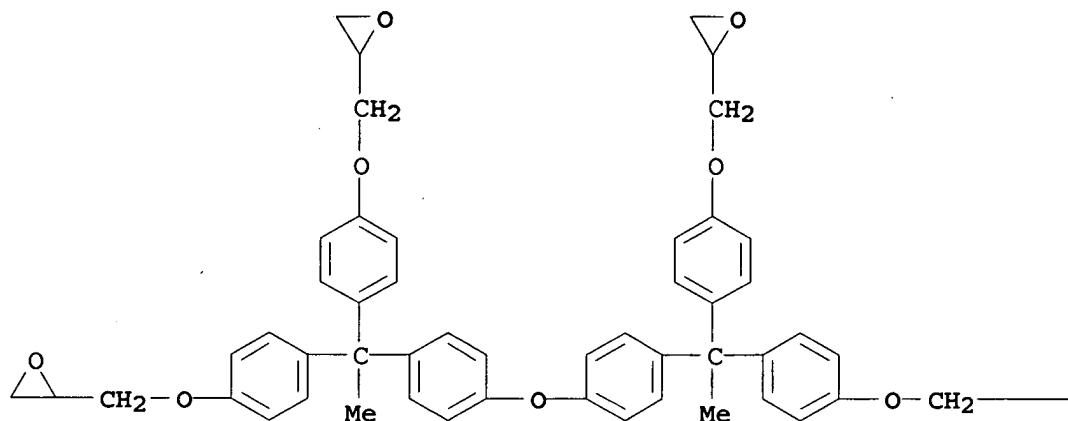
AB    Title compns. with good **resistance** to soldering stress contain (A) epoxy resins containing 40-100% (based on total epoxy resin) tetrafunctional epoxy resins of general formula I (R1-2 = H, alkyl; R3-14 = H, halo, alkyl), (B) phenolic resin hardeners, (C) inorg. fillers, and (D) hardening accelerators. Thus, I (R1-2 = Me, R3-14 = H) (II) 16, o-cresol novolak epoxy resin (III) 4, phenol novolak resin 10, powdered fused SiO<sub>2</sub> 68.8, Ph<sub>3</sub>P 0.2, C black 0.5, and carnauba wax 0.5 parts were melt kneaded, crushed, and transfer molded to obtain potted test packages showing 0/16 and 0/16 cracks by treating them in solder bath after they were kept at 85° and 85% relative humidity for 48 h and 72 h, resp., and 50% malfunction after >400 h under pressure cooker conditions for the latter sample, vs. 4/16, 14/16, and 300 h, resp., for the composition containing 6 parts II and 14 parts III.

IT    140365-06-6  
 (potting compns. containing, with good **resistance** to soldering stress, for semiconductors)

RN    140365-06-6    HCPLUS

CN    Oxirane, 2,2',2'',2'''- [oxybis[4,1-phenyleneethylidynebis(4,1-phenyleneoxymethylene)] ]tetrakis- (9CI)    (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08G059-32  
 ICS C08L063-00; H01L023-29; H01L023-31  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 76  
 ST epoxy resin solder heat resistance; semiconductor potting  
 epoxy resin blend; crack resistance epoxy resin sealant;  
 heat resistance epoxy resin sealant  
 IT Heat-resistant materials  
 (epoxy resin compns. containing phenolic resin hardeners and inorg.  
 fillers and hardening accelerators, for sealing semiconductors)  
 IT Epoxy resins, uses  
 (potting compns., with good resistance to soldering  
 stress, for semiconductors)  
 IT Phenolic resins, uses  
 (epoxy, novolak, potting compns., with good resistance to  
 soldering stress, for semiconductors)  
 IT Potting compositions  
 (heat-resistant, epoxy resin compns. containing phenolic  
 resin hardeners and inorg. fillers and hardening accelerators, for  
 semiconductors)

IT Epoxy resins, uses  
(phenolic, novolak, potting compns., with good resistance to soldering stress, for semiconductors).

IT 140365-06-6  
(potting compns. containing, with good resistance to soldering stress, for semiconductors)

L61 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:31529 HCAPLUS

DOCUMENT NUMBER: 116:31529

TITLE: Vinylphenyl compounds, their preparation, and polymerizable compositions, crosslinked polymers, and optical disk substrates containing them

INVENTOR(S): Ueda, Masahide; Nakamura, Kanehiro; Matsumoto, Yoshifumi; Kusaba, Mari

PATENT ASSIGNEE(S): Tokuyama Soda Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

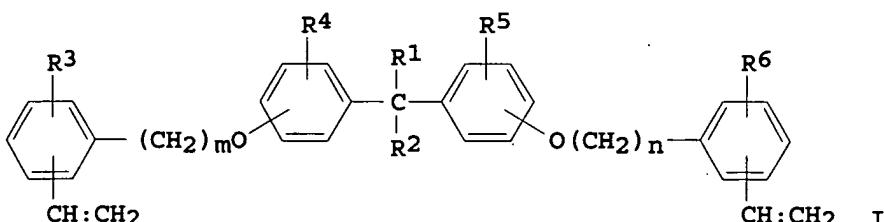
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 415729	A2	19910306	EP 1990-309424	19900829
EP 415729	A3	19910828		<--
R: DE, FR, GB, NL JP 03163039	A	19910715	JP 1990-144490	19900604
JP 2868844	B2	19990310		<--
US 5138001	A	19920811	US 1990-572454	19900827
CA 2024187	A1	19910301	CA 1990-2024187	19900828
PRIORITY APPLN. INFO.:			JP 1989-220360	A 19890829
			<--	
			JP 1990-144490	A 19900604
			<--	

OTHER SOURCE(S): MARPAT 116:31529

ED Entered STN: 24 Jan 1992

GI



AB The compds. have the general formula I, where R1 = C6-12 aryl or C7-10 aralkyl; R2-6 = H or C1-4 alkyl; and m, n ≥ 1.

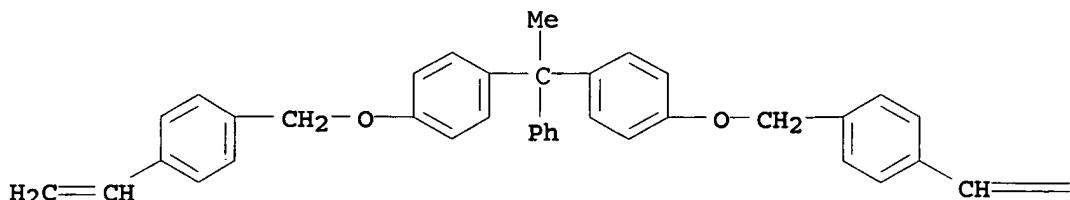
IT 135705-97-4P 135705-99-6P 135706-01-3P  
135706-03-5P

(preparation of, for production of crosslinked polymers for optical disk substrates)

RN 135705-97-4 HCPLUS

CN Benzene, 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]- (CA INDEX NAME)

PAGE 1-A



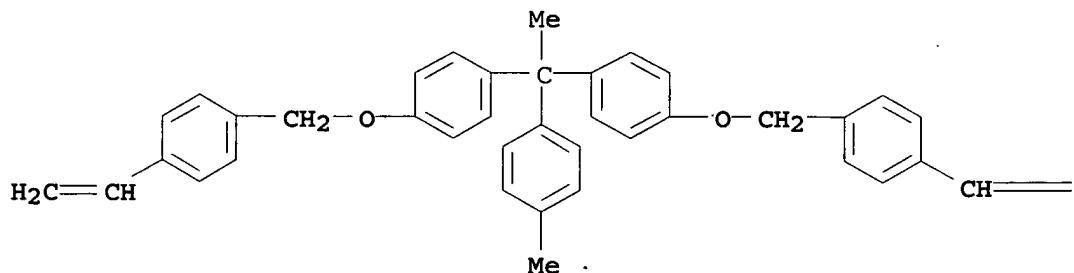
PAGE 1-B

$\equiv \text{CH}_2$

RN 135705-99-6 HCPLUS

CN Benzene, 1,1'-(1-(4-methylphenyl)ethylidene)bis[4-[(4-ethenylphenyl)methoxy]- (CA INDEX NAME)

PAGE 1-A



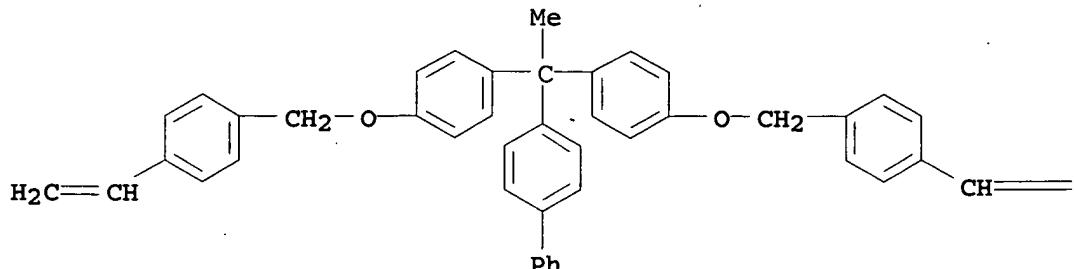
PAGE 1-B

$\equiv \text{CH}_2$

RN 135706-01-3 HCAPLUS

CN 1,1'-Biphenyl, 4-[1,1-bis[4-[(4-ethenylphenyl)methoxy]phenyl]ethyl]-(9CI) (CA INDEX NAME)

PAGE 1-A



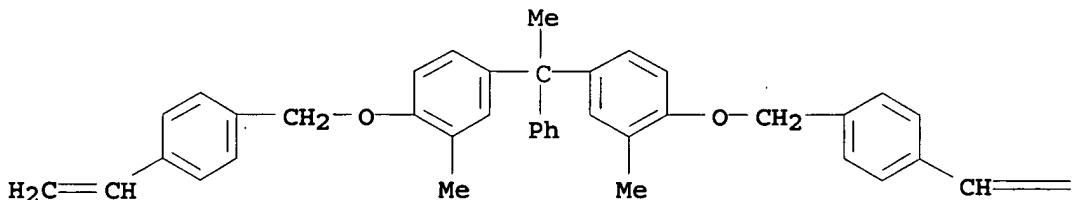
PAGE 1-B

= CH<sub>2</sub>

RN 135706-03-5 HCAPLUS

CN Benzene, 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]-3-methyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

= CH<sub>2</sub>

IC ICM C07C043-215

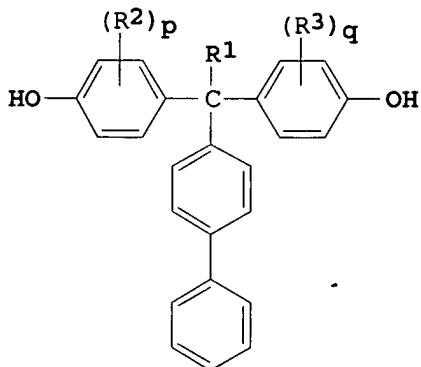
ICS C07C041-16; C08F212-34; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 135705-97-4P 135705-99-6P 135706-01-3P  
 135706-03-5P 135706-05-7P 135706-07-9P 135742-91-5P  
 135785-18-1P  
 (preparation of, for production of crosslinked polymers for optical disk substrates)

L61 ANSWER 39 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1988:407157 HCPLUS  
 DOCUMENT NUMBER: 109:7157  
 TITLE: Manufacture of heat-resistant polycarbonates with good mechanical properties  
 INVENTOR(S): Shigematsu, Kazuyoshi; Nakagawa, Takashi  
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63039919	A	19880220	JP 1986-181852 ---	19860804
JP 2520097	B2	19960731		
PRIORITY APPLN. INFO.:			JP 1986-181852 ---	19860804

ED Entered STN: 09 Jul 1988  
 GI



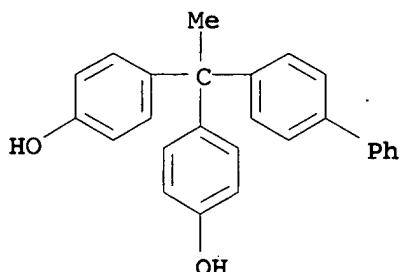
AB Title polycarbonates (reduced viscosity  $\geq 0.2$  dL/g, at 20° 0.5 g/dL CH<sub>2</sub>Cl<sub>2</sub>) with good optical properties are prepared from dihydric phenols I (R<sub>1</sub> = H, C<sub>1-5</sub> alkyl, aryl; R<sub>2</sub>, R<sub>3</sub> = H, halogen, C<sub>1-5</sub> alkyl, aryl; p, q = 1-4) with carbonate esters. Thus, acetyl biphenyl 50, PhOH 75, and thioacetic acid 5 g were stirred under HCl gas for 24 h and reacted 72 h to give 65 g 1-(4-biphenyl)-1,1-bis(4-hydroxyphenyl)ethane (m.p. 185°), 40 g of which in 2N aqueous NaOH was reacted with 250 mL/min COCl<sub>2</sub> for 25 min in the presence of

250 mL CH<sub>2</sub>Cl<sub>2</sub> and 1.0 g p-tert-butylphenol, giving a transparent polymer (reduced viscosity 0.45 dL/g) with nD<sub>20</sub> 1.6275.

IT 111203-78-2P  
(preparation and polymerization of, for polycarbonates)

RN 111203-78-2 HCPLUS

CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



IC ICM C08G063-62

ICS C08G063-62

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 73

ST polycarbonate heat **resistant** mech strength; acetyl biphenyl phenol condensation; refractive index heat **resistant** polycarbonate

IT Heat-**resistant** materials

(aromatic polycarbonates, preparation of, for optical materials)

IT Transparent materials

(aromatic polycarbonates, preparation of, heat-**resistant**, with good mech. strength)

IT 111203-78-2P 114555-52-1P 114626-11-8P

(preparation and polymerization of, for polycarbonates)

L61 ANSWER 40 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:608935 HCPLUS

DOCUMENT NUMBER: 107:208935

TITLE: Recording material

INVENTOR(S): Takashima, Masanobu; Satomura, Masato; Iwakura, Ken; Igarashi, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

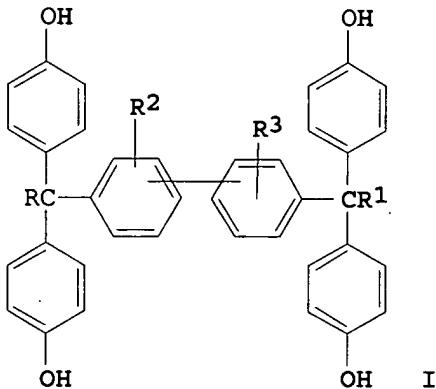
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62122783	A	19870604	JP 1985-263229	19851122
GB 2184558	A	19870624	GB 1986-27800	19861120
GB 2184558	B	19891018		
US 4707464	A	19871117	US 1986-933514	19861121
PRIORITY APPLN. INFO.:			JP 1985-263228	A 19851122
				<--

JP 1985-263229 A 19851122  
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 JP 1985-287068 A 19851220  
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ED Entered STN: 27 Nov 1987  
 GI

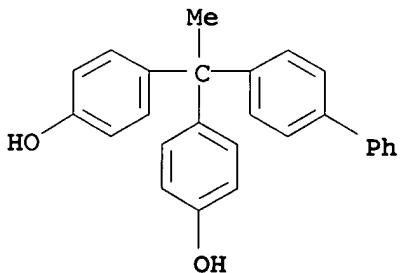


AB A recording material contains (1) an electron-donating uncolored dye precursor, and (2) an electron-accepting compound of the formula I (R, R1 = H, alkyl, aryl; R2, R3 = H, halo, alkyl, alkoxy). The material has high color developability, good storage stability, and good compatibility among the components in the imaging layer. The obtained dye image also has excellent stability. Thus, a color-former sheet having a coated layer which contains microcapsules of 2-anilino-3-methyl-6-diethylaminofluoran/alkylnaphthalene/gelation/gum arabic was combined with a developer sheet having a coated layer which incorporates 4,4'-bis(1,1-bis(4-hydroxyphenyl)ethyl)biphenyl/kaolin/poly(vinyl alc.) dispersion for pressure-sensitive recording. The results showed the advantages of the developer as described above.

IT 111203-78-2  
 (color developer, pressure-sensitive copying sheets containing leuco dye and)

RN 111203-78-2 HCAPLUS

CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



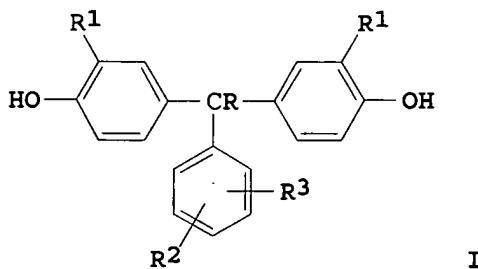
IC ICM B41M005-12  
 ICS B41M005-18  
 CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 111203-78-2 111203-79-3  
 (color developer, pressure-sensitive copying sheets containing leuco dye and)

L61 ANSWER 41 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1987:608934 HCPLUS  
 DOCUMENT NUMBER: 107:208934  
 TITLE: Recording material  
 INVENTOR(S): Takashima, Masanobu; Satomura, Masato; Iwakura, Ken; Igarashi, Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62122782	A	19870604	JP 1985-263228 <--	19851122
JP 07107005	B	19951115		
GB 2184558	A	19870624	GB 1986-27800 <--	19861120
GB 2184558	B	19891018		
US 4707464	A	19871117	US 1986-933514 <--	19861121
PRIORITY APPLN. INFO.:			JP 1985-263228 <--	A 19851122
			JP 1985-263229 <--	A 19851122
			JP 1985-287068 <--	A 19851220

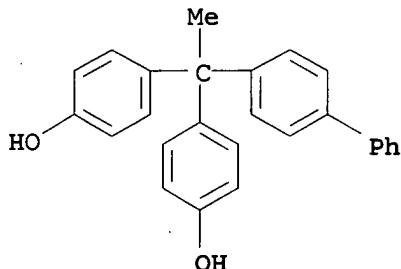
ED Entered STN: 27 Nov 1987  
 GI



AB A recording material contains (1) an electron-donating uncolored dye precursor, and (2) an electron-accepting compound of the formula I (R = H, alkyl, aryl; R1 = H, lower alkyl, allyl, halo; R2 = aryl; R3 = H, halo, alkyl, alkoxy). The material has high color developability, good storage stability, and good compatibility among the components in the imaging layer. The obtained dye image has also excellent stability. Thus, a color former sheet having a coated layer containing

microcapsules of 2-anilino-3-methyl-6-diethylaminofluoran/alkylnaphthalene/gelatin/gum arabic was combined with a developer sheet having a coated layer containing 4-[1,1-bis(4-hydroxyphenyl)ethyl]biphenyl/kaolin/poly(vinyl alc.) dispersion for pressure-sensitive recording. The results showed the advantages of the developer as described above.

IT 111203-78-2  
 (color developer, pressure-sensitive copying sheets containing leuco dye and)  
 RN 111203-78-2 HCAPLUS  
 CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



IC ICM B41M005-12  
 ICS B41M005-18  
 CC 74-11 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)  
 IT '80-05-7D, derivs. 111203-78-2 111203-79-3  
 (color developer, pressure-sensitive copying sheets containing leuco dye and)

L61 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

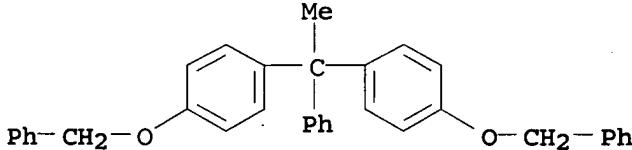
ACCESSION NUMBER: 1984:52546 HCAPLUS  
 DOCUMENT NUMBER: 100:52546  
 TITLE: Polyester molding compositions  
 PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58093752	A	19830603	JP 1981-192297	19811130 <--
PRIORITY APPLN. INFO.:			JP 1981-192297	19811130 <--

ED Entered STN: 12 May 1984  
 AB Poly(ethylene terephthalate) (I) [25038-59-9] compns. having low volatile loss at high temps., and which can be molded at low temps. into articles having low heat shrinkage and high surface luster, contain 0.1-10% bisphenol diethers having mol. weight  $\geq 300$ , and 0.05-10% crystal nucleating agents, which may be polyamides and/or polyhydrazides which are solid and stable at  $270^\circ$ , alkali metal salts of aromatic oxysulfonic acids, and/or talc. Thus, I 100, talc 1, methylenebisphenol dibenzyl ether (II) [88484-11-1] 4, and chopped glass fibers 45 parts were mixed, pelletized, dried 5 h at

150°, and injection molded at 280° (mold temperature 110°) into test specimens having glossy surfaces, 0.6% volatile loss when pulverized and heated to 150° for 1 h, and heat shrinkage (specimens made at mold temperature 80°) 0.39% after 2 h at 150°, compared with rough surfaces, 0.3%, and 0.72%, resp., for a similar composition without II, and rough surfaces, 0.6%, and 0.75%, resp., for a similar composition without talc.

IT 88457-48-1  
 (crystallization accelerators, with crystal nucleating agents, for polyester moldings with low heat shrinkage)  
 RN 88457-48-1 HCPLUS  
 CN Benzene, 1,1'-(1-phenylethylidene)bis[4-(phenylmethoxy)- (CA INDEX NAME)]



IC C08L067-02; C08K003-34; C08K005-06; C08K005-42  
 ICI C08L067-02, C08L077-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST polyethylene terephthalate low temp molding; heat shrinkage  
 resistant polyester molding; talc crystal nucleating agent  
 polyester; polyamide crystal nucleating agent polyester; polyhydrazide  
 crystal nucleating agent polyester; oxysulfonate crystal nucleating  
 agent polyester; ether bisphenol crystn accelerator polyester; phenol  
 ether crystn accelerator polyester  
 IT 71338-01-7 87353-49-9 88216-41-5 88457-47-0 88457-48-1  
 88457-51-6 88457-52-7 88457-53-8 88480-41-5 88484-11-1  
 (crystallization accelerators, with crystal nucleating agents, for  
 polyester moldings with low heat shrinkage)

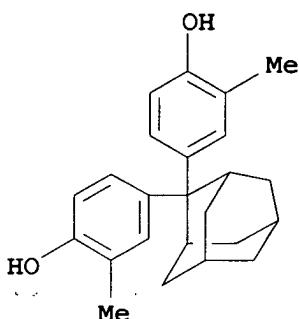
L61 ANSWER 43 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1976:74649 HCPLUS  
 DOCUMENT NUMBER: 84:74649  
 ORIGINAL REFERENCE NO.: 84:12267a,12270a  
 TITLE: Carbo polyesters from 2,2-bis(4-hydroxyphenyl)adamantane and its phenyl-substituted derivatives  
 AUTHOR(S): Papava, G. Sh.; Beridze, L. A.; Gelashvili, N. S.; Tsiskarishvili, P. D.  
 CORPORATE SOURCE: Inst. Fiz. Org. Khim. im. Melikishvili, Tiflis, USSR  
 SOURCE: Izvestiya Akademii Nauk Gruzinskoi SSR, Seriya Khimicheskaya (1975), 1(3), 235-42  
 CODEN: IGSKDH; ISSN: 0132-6074  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 ED Entered STN: 12 May 1984  
 GI For diagram(s), see printed CA Issue.  
 AB Polyesters, prepared by condensing dicarboxylic acids with 2,2-bis(4-hydroxyphenyl)adamantane (I, X = X' = H) (II) [52211-74-2], 2,2-bis(3-chloro-4-hydroxyphenyl)adamantane (I, X = Cl, X' = H) [58104-26-0], 2,2-bis(3,5-dichloro-4-hydroxyphenyl)adamantane (I, X = X' = Cl) [58104-27-1], or

2,2-bis(3-methyl-4-hydroxyphenyl)adamantane (I, X = Me, X' = H) (III) [52211-75-3] have excellent heat resistance; heated in the air they start to lose weight at 380-400° and decompose at 500-580° without leaving residues. II and III can be prepared by condensing phenol [108-95-2] or o-cresol [95-48-7] with 2-adamantanone [700-58-3]. The chlorination of I (X = X' = H) give the mono- and dichloro derivs. Some polyesters prepared from I, e.g., poly(2,2-adamantylidenedi-p-phenylene terephthalate) [56316-07-5] or poly(2,2-adamantylidenedi-p-phenylene sebacate) [56316-05-3] are crystalline; other polyesters, e.g., poly(2,2-adamantylidenedi-p-phenylene isophthalate) [56316-06-4] or poly[2,2-adamantylidenebis(3,5-dichloro-4-phenylene)isophthalate] [58129-97-8] are amorphous.

IT 52211-75-3P 58104-26-0P 58104-27-1P  
(preparation and polymerization of)

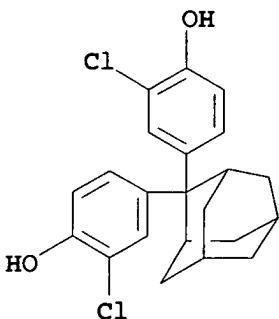
RN 52211-75-3 HCPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis[2-methyl- (9CI) (CA INDEX NAME)



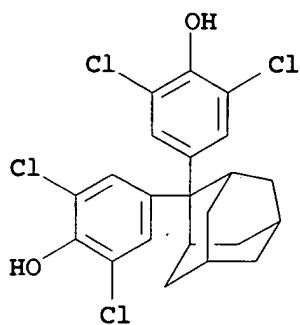
RN 58104-26-0 HCPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis[2-chloro- (9CI) (CA INDEX NAME)

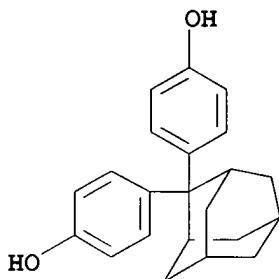


RN 58104-27-1 HCPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis[2,6-dichloro- (9CI) (CA INDEX NAME)



IT 52211-74-2P  
 (preparation and reactions of)  
 RN 52211-74-2 HCPLUS  
 CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



CC 35-3 (Synthetic High Polymers)  
 ST adamantane deriv polyester; heat resistant polyester  
 adamantylidenediphenylene; hydroxyphenyladamantane deriv polyester  
 IT Heat-resistant materials  
 (adamantane ring-containing cardo polyesters)  
 IT 52211-75-3P 58104-26-0P 58104-27-1P  
 (preparation and polymerization of)  
 IT 52211-74-2P  
 (preparation and reactions of)

L61 ANSWER 44 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1975:515498 HCPLUS  
 DOCUMENT NUMBER: 83:115498  
 ORIGINAL REFERENCE NO.: 83:18159a,18162a  
 TITLE: Carbo polycondensation polymers from  
 2,2-bis(4-hydroxyphenyl)adamantane  
 AUTHOR(S): Beridze, L. A.; Maisuradze, N. A.; Abnerova, S.  
 V.; Dokhturishvili, N. S.; Papava, G. Sh.;  
 Tsiskarishvili, P. D.; Gelashvili, N. S.;  
 Vinogradova, S. V.; Korshak, V. V.  
 CORPORATE SOURCE: USSR  
 SOURCE: Sint. Svoistva Nek. Nov. Polim. Mater. (1974), 19-30. "Metsnireba": Tiflis,  
 USSR.  
 DOCUMENT TYPE: Conference  
 LANGUAGE: Russian  
 ED Entered STN: 12 May 1984

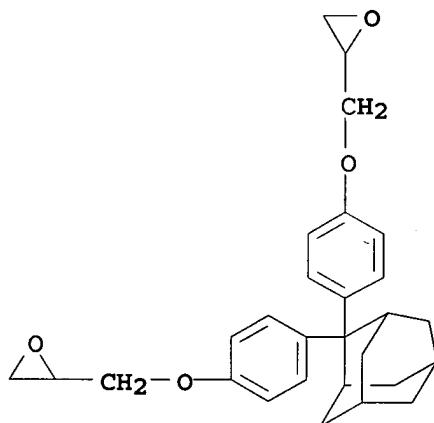
AB Condensation of 2-adamantanone [700-58-3] with phenol [108-95-2] in presence of HCl gave 2,2-bis(4-hydroxyphenyl)adamantane (I) [52211-74-2] which was converted to polyesters, epoxy resins, and copolymers with formaldehyde. Polycondensation at 150-220° in  $\alpha$ -chloronaphthalene was used for preparation of 2,2-bis(4-hydroxyphenyl)adamantane-terephthaloyl chloride copolymer (II) [56315-64-1], and 2,2-bis(4-hydroxyphenyl)adamantane-isophthaloyl chloride copolymer (III) [56315-63-0] and 2,2-bis(4-hydroxyphenyl)adamantane-sebacoyl chloride copolymer (IV) [56315-62-9] were prepared by polycondensation at 50° in acetone. Crystalline II and III were amorphized by reprecipitation. The softening points of II and III were apprx. 370-420° as compared to 110-30° for IV. Condensation of I with epichlorohydrin gave 2,2-bis(4-hydroxyphenyl)adamantane diglycidyl ether [56323-07-0] which was crosslinked by 4,4'-oxybis(phthalic anhydride) [1823-59-2] and m-phenylenediamine [108-45-2]. 2,2-Bis(4-hydroxyphenyl)adamantane-formaldehyde copolymer [56315-61-8] was obtained in the resol and resite forms.

IT 56323-07-0P

(crosslinking and preparation of)

RN 56323-07-0 HCAPLUS

CN Oxirane, 2,2'-(tricyclo[3.3.1.13,7]decylidenebis(4,1-phenyleneoxymethylene))bis- (CA INDEX NAME)

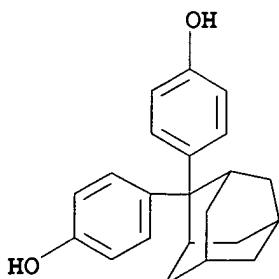


IT 52211-74-2P

(preparation and polymerization of)

RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.13,7]decylidenebis- (CA INDEX NAME)



CC 36-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 24, 25

IT Epoxy resins  
(bis(hydroxyphenyl)adamantane diglycidyl ether, crosslinking and  
heat resistance of)

IT Phenolic resins  
(bis(hydroxyphenyl)adamantane-formaldehyde copolymers, heat  
resistance and preparation of)

IT 56323-07-0P  
(crosslinking and preparation of)

IT 56315-64-1 56316-07-5  
(crystallinity and heat resistance of)

IT 56315-61-8 56315-62-9 56315-63-0 56316-05-3 56316-06-4  
(heat resistance of)

IT 52211-74-2P  
(preparation and polymerization of)

=> d his nofile

(FILE 'HOME' ENTERED AT 09:28:07 ON 03 DEC 2007)

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 L1 1 SEA ABB=ON PLU=ON US20050271971/PN  
 SEL RN

FILE 'REGISTRY' ENTERED AT 09:28:35 ON 03 DEC 2007  
 L2 20 SEA ABB=ON PLU=ON (108-46-3/BI OR 110-87-2/BI OR  
 125748-07-4/BI OR 156281-11-7/BI OR 1927-95-3/BI OR  
 211427-64-4/BI OR 24424-99-5/BI OR 27955-94-8/BI OR  
 29654-55-5/BI OR 5001-18-3/BI OR 5292-43-3/BI OR 623-05-2/B  
 I OR 65338-98-9/BI OR 683227-72-7/BI OR 683227-73-8/BI OR  
 683227-74-9/BI OR 683227-75-0/BI OR 683227-76-1/BI OR  
 75-07-0/BI OR 99181-50-7/BI)

L3 STR  
 L4 0 SEA SSS SAM L3  
 L5 4 SEA ABB=ON PLU=ON L2 AND TRICYCLO  
 L6 STR 5001-18-3  
 L7 50 SEA SSS SAM L6  
 L8 SCR 1992 OR 2021 OR 2016 OR 2026  
 L9 50 SEA SSS SAM L6 NOT L8  
 L10 STR L6  
 L11 STR L10  
 L12 STR L11  
 L13 STR L12  
 L14 0 SEA SSS SAM L13  
 L15 0 SEA SSS SAM L13 NOT L8

FILE 'LREGISTRY' ENTERED AT 10:27:10 ON 03 DEC 2007  
 L16 STR L13  
 L17 2 SEA SSS SAM L16 NOT L8  
 L18 STR L16

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 L19 0 SEA SSS SAM L16  
 L20 1 SEA SSS SAM L16 NOT L8  
 L21 0 SEA ABB=ON PLU=ON L2 AND PMS/CI  
 L22 SCR 2043  
 L23 1 SEA SSS SAM L16 NOT (L8 OR L22)

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 L24 STR L16

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 L27 9 SEA SSS SAM L26  
 L28 STR L26  
 L29 42 SEA SSS SAM L28  
 L30 STR L28  
 L31 50 SEA SSS SAM L30

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 L35 STR L28

L36 50 SEA SSS SAM L35  
L37 50 SEA SSS SAM L35 NOT L8  
L38 STR L35  
L39 50 SEA SSS SAM L38 NOT (L8 OR L22)  
L40 STR  
L41 50 SEA SSS SAM L38 NOT (L8 OR L22)  
L42 16441 SEA SSS FUL L38 NOT (L8 OR L22)  
L43 7 SEA ABB=ON PLU=ON L42 AND L2  
SAV L42 LEE208/A  
L44 50 SEA SUB=L42 SSS SAM L40  
L45 50 SEA SUB=L42 SSS SAM L6  
L46 STR L6  
L47 50 SEA SUB=L42 SSS SAM L46  
L48 STR L40  
L49 50 SEA SUB=L42 SSS SAM L48  
L50 STR L38  
L51 50 SEA SUB=L42 SSS SAM L50  
L52 STR L50  
L53 33 SEA SUB=L42 SSS SAM L52  
L54 744 SEA SUB=L42 SSS FUL L52  
L55 2 SEA ABB=ON PLU=ON L54 AND L2  
SAV L54 LEE208A/A

FILE 'HCAPLUS' ENTERED AT 12:17:29 ON 03 DEC 2007

L56 426 SEA ABB=ON PLU=ON L54  
L57 1 SEA ABB=ON PLU=ON L1 AND L56  
L58 30 SEA ABB=ON PLU=ON L56 AND PHOTOG?/SC, SX  
L59 55 SEA ABB=ON PLU=ON L56 AND ?RESIST?  
L60 66 SEA ABB=ON PLU=ON L58 OR L59  
L61 44 SEA ABB=ON PLU=ON L60 AND (1840-2003)/PRY, AY, PY

SCIENTIFIC REFERENCE Br  
Sci & Tech Inf - Cntr  
NOV 28 1988

Access DB# 244070

## SEARCH REQUEST FORM

## Scientific and Technical Information Center

Pat & T.M Office  
Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 11-26-09  
Art Unit: 1795 Phone Number 301/2-1333 Serial Number: 101531, 208  
Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle):  PAPER  DISK  E-MAIL  
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

**Title of Invention:** 10. *...*

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

**\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

please search for the compound of

cl. #25-



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## \*BIBDATASHEET\*

Bib Data Sheet

CONFIRMATION NO. 6424

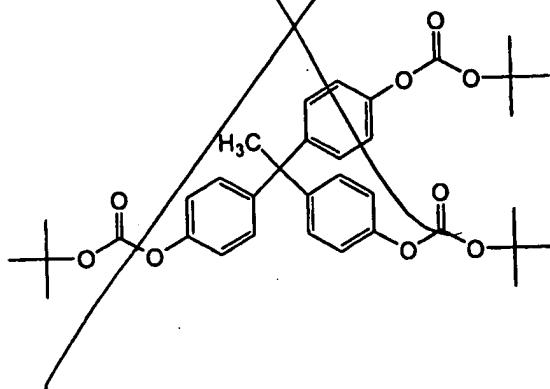
SERIAL NUMBER 10/531,208	FILING OR 371(c) DATE 04/14/2005 RULE	CLASS 430	GROUP ART UNIT 1756	ATTORNEY DOCKET NO. 28955.1048	
<b>APPLICANTS</b> Mitsuru Ueda, Tokyo, JAPAN; Hirotoshi Ishii, Chiba, JAPAN;					
<b>** CONTINUING DATA **</b> This application is a 371 of PCT/JP03/11137 09/01/2003 SJ L					
<b>** FOREIGN APPLICATIONS **</b> JAPAN 2002300144 10/15/2002 ) SJ L JAPAN 2003112458 04/17/2003					
Foreign Priority claimed <input checked="" type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after met Verified and Acknowledged  Examiner's Signature		STATE OR COUNTRY JAPAN	SHEETS DRAWING	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
<b>ADDRESS</b> 27890					
<b>TITLE</b> Photoresist base material, method for purification thereof, and photoresist compositions					
FILING FEE RECEIVED 900	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other <input type="checkbox"/> Credit	

which R, RO- and ROCO are extreme ultra-violet reactive groups or groups having reactivity to the action of a chromophore active to extreme ultra-violet,

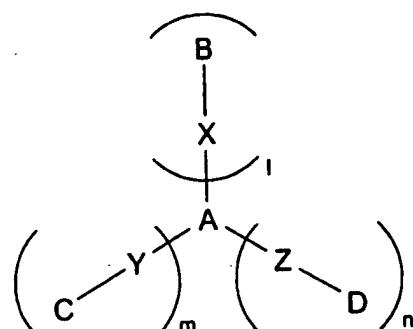
wherein each of X, Y and Z is independently a single bond or an ether bond, and

$$l + m + n = 2, 3 \text{ or } 4;$$

provided that excluded is the organic compound represented as follows

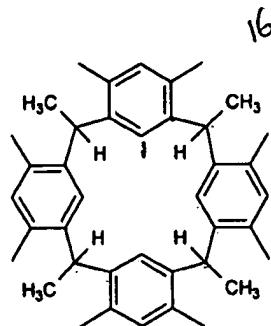


25. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),

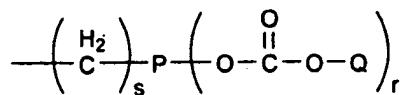


(1)

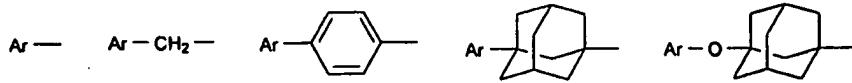
wherein A is an organic group represented by



wherein each of B, C and D is selected from the group consisting of tert-butyl, 1-tetrahydropyranyl, 1-tetrahydrofuryl, 1-ethoxyethyl, 1-phenoxyethyl, an organic group represented by

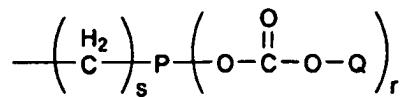


wherein P is an aromatic group having a valence of  $(r + 1)$  and having 6 to 20 carbon atoms, Q is an organic group having 4 to 30 carbon atoms, r is an integer of 1 to 10 and s is an integer of 0 to 10,  
and an organic group selected from the group consisting of



wherein Ar is a phenyl or naphthyl group substituted with RO- and/or ROCO- in which R is selected from the group consisting of hydrogen, tert-butyl, tert-

butyloxycarbonylmethyl, tert-butyloxycarbonyl, 1-tetrahydropyranyl, 1-tetrahydrofuryl, 1-ethoxyethyl, 1-phenoxyethyl and an organic group represented by



wherein P is an aromatic group having a valence of  $(r + 1)$  and having 6 to 20 carbon atoms, Q is an organic group having 4 to 30 carbon atoms, r is an integer of 1 to 10 and s is an integer of 0 to 10,

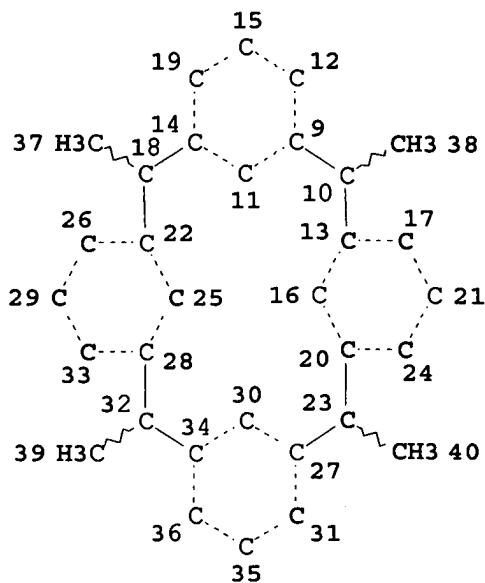
and wherein each of X, Y and Z is independently a single bond or an ether bond,  
and

$$l + m + n = 8.$$

=> d que

L4

STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

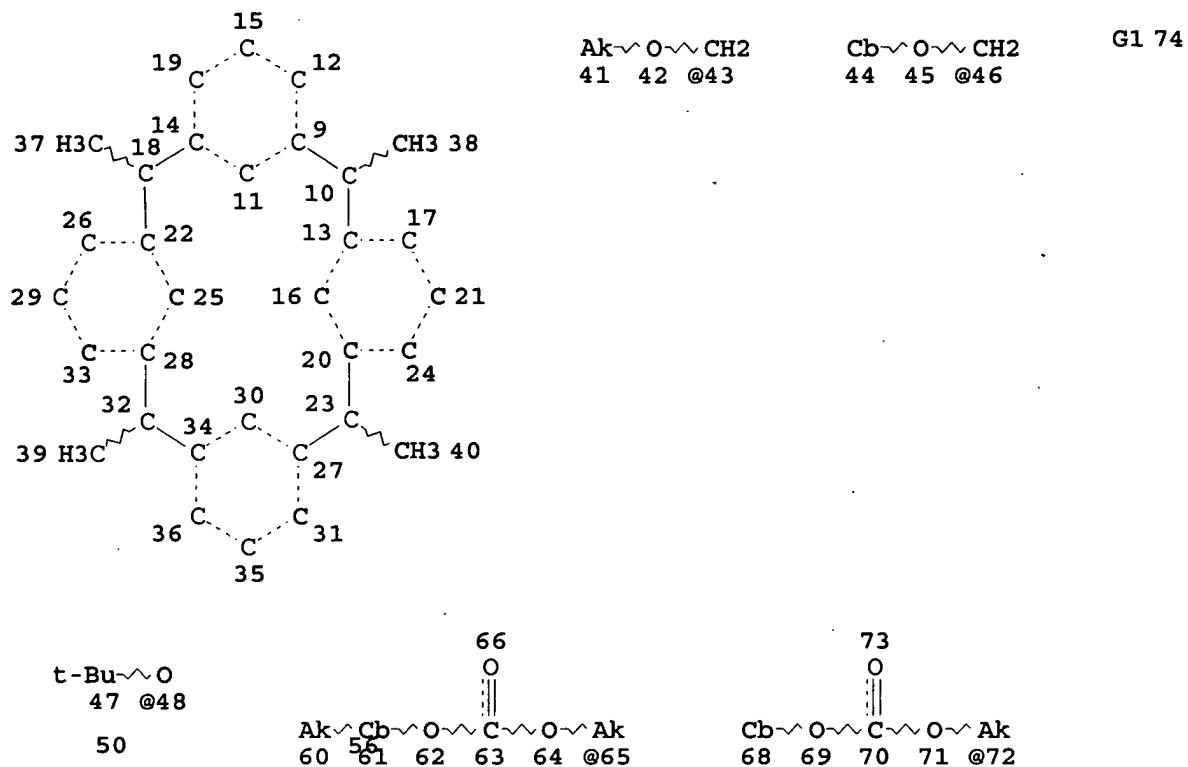
## GRAPH ATTRIBUTES:

## RSPEC I

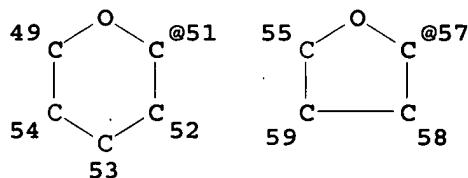
NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE

46 STR



## Page 1-A



## Page 2-A

VAR G1=43/46/48/51/57/65/72

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 65

STEREO ATTRIBUTES: NONE

L8	15797	SEA FILE=REGISTRY ABB=ON	PLU=ON	11417.1.2/RID
L9	907	SEA FILE=REGISTRY SSS FUL	L4	
L12	76	SEA FILE=REGISTRY SUB=L9	SSS FUL	L6
L13	54	SEA FILE=REGISTRY ABB=ON	PLU=ON	L12 NOT 1-100/N
L15	114651	SEA FILE=REGISTRY ABB=ON	PLU=ON	638.8.1/RID
L16	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L9 AND L15
L17	165	SEA FILE=REGISTRY ABB=ON	PLU=ON	L8 AND L15
L18	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L17 AND L9
L21	630432	SEA FILE=REGISTRY ABB=ON	PLU=ON	46.157.1/RID
L24	525267	SEA FILE=REGISTRY ABB=ON	PLU=ON	16.138.1/RID

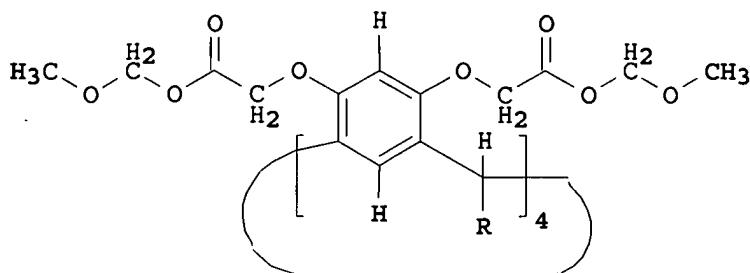
L25 292 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND (L21 OR L24)  
 L26 5 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND L9  
 L28 2 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND TETRAMETHYLPENTA  
 CYCLO?  
 L29 617 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND TETRAMETHYLPENTAC  
 YCLO?  
 L30 289 SEA FILE=REGISTRY ABB=ON PLU=ON L29 NOT 1-100/N  
 L31 51 SEA FILE=HCAPLUS ABB=ON PLU=ON L13  
 L32 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L16  
 L33 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18  
 L34 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L26  
 L35 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L28  
 L36 55 SEA FILE=HCAPLUS ABB=ON PLU=ON (L31 OR L32 OR L33 OR L34  
 OR L35)  
 L38 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (1840-2003)/PRY,AY  
 ,PY  
 L39 252 SEA FILE=HCAPLUS ABB=ON PLU=ON L30  
 L40 37 SEA FILE=HCAPLUS ABB=ON PLU=ON L39(L)PHOTO?  
 L41 27 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND ?RESIST?  
 L42 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND (1840-2003)/PRY,AY  
 ,PY  
 L43 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L38  
 L44 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L38 OR L43

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L44 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:563698 HCAPLUS  
 DOCUMENT NUMBER: 143:106359  
 TITLE: Acid-labile acetal group-containing  
 calix[4]resorcinarenes and chemically amplified  
 resists containing them  
 INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto  
 PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005170902	A	20050630	JP 2003-416509 <--	20031215
PRIORITY APPLN. INFO.:			JP 2003-416509 <--	20031215

ED Entered STN: 30 Jun 2005  
 GI



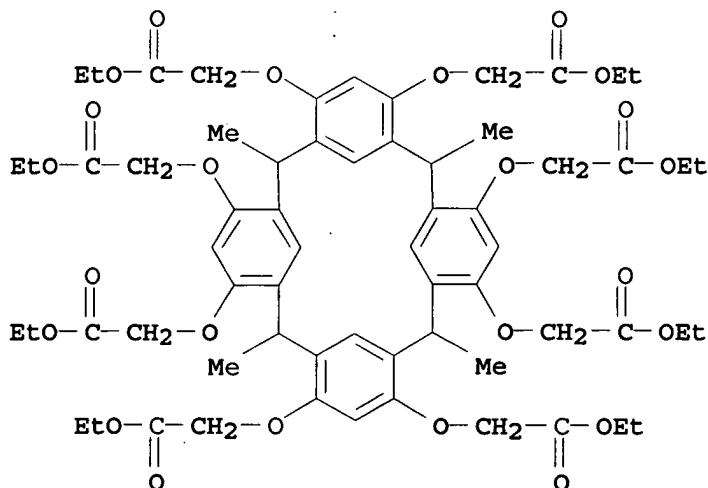
I

AB The calix[4]resorcinarenes are I (R = Me, 4-MeOCH<sub>2</sub>O<sub>2</sub>CCH<sub>2</sub>O<sub>2</sub>C<sub>6</sub>H<sub>4</sub>). The resists contain I and photoacid generators. The I show good solubility in casting solvents, and good resistance to heat and alkali developers, resulting in forming high-resolution patterns.

IT 171799-35-2P  
(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

RN 171799-35-2 HCPLUS

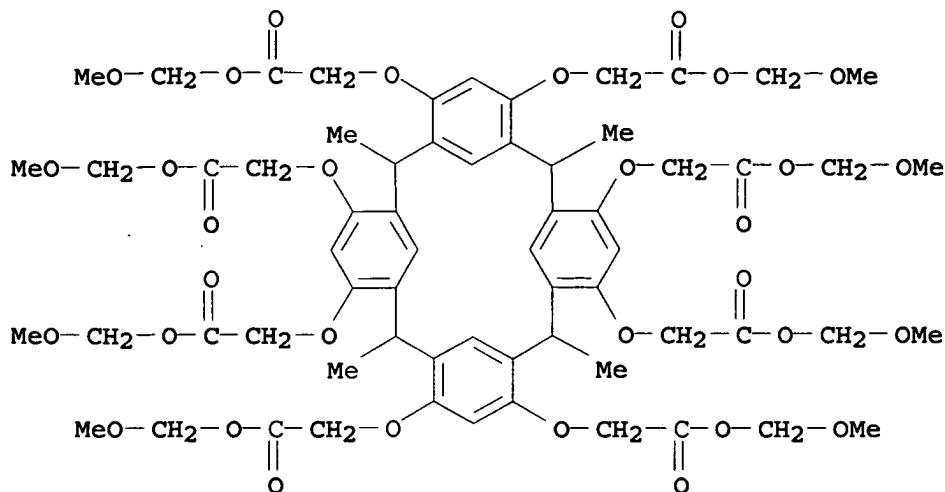
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, 1,1',1'',1''',1''''',1''''''',1'''''''',1'''''''-octaethyl ester (CA INDEX NAME)



IT 830329-30-1P  
(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

RN 830329-30-1 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(methoxymethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-736  
 ICS G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25  
 IT 65338-98-9P 130508-38-2P 171799-35-2P 176897-13-5P  
 710970-56-2P 830329-32-3P  
 (acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)  
 IT 830329-30-1P 830329-31-2P  
 (acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

=> d 144 2-44 ibib ed abs hitstr hitind

L44 ANSWER 2 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:778878 HCPLUS  
 DOCUMENT NUMBER: 141:295753  
 TITLE: Calixresorcinarenes, their preparation, and refractive index-changing materials and photothermal energy conversion-storage materials containing them  
 INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto  
 PATENT ASSIGNEE(S): Kanagawa University, Japan; JSR Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004262822	A	20040924	JP 2003-54243	20030228
PRIORITY APPLN. INFO.:			JP 2003-54243	20030228

OTHER SOURCE(S): MARPAT 141:295753  
 ED Entered STN: 24 Sep 2004

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

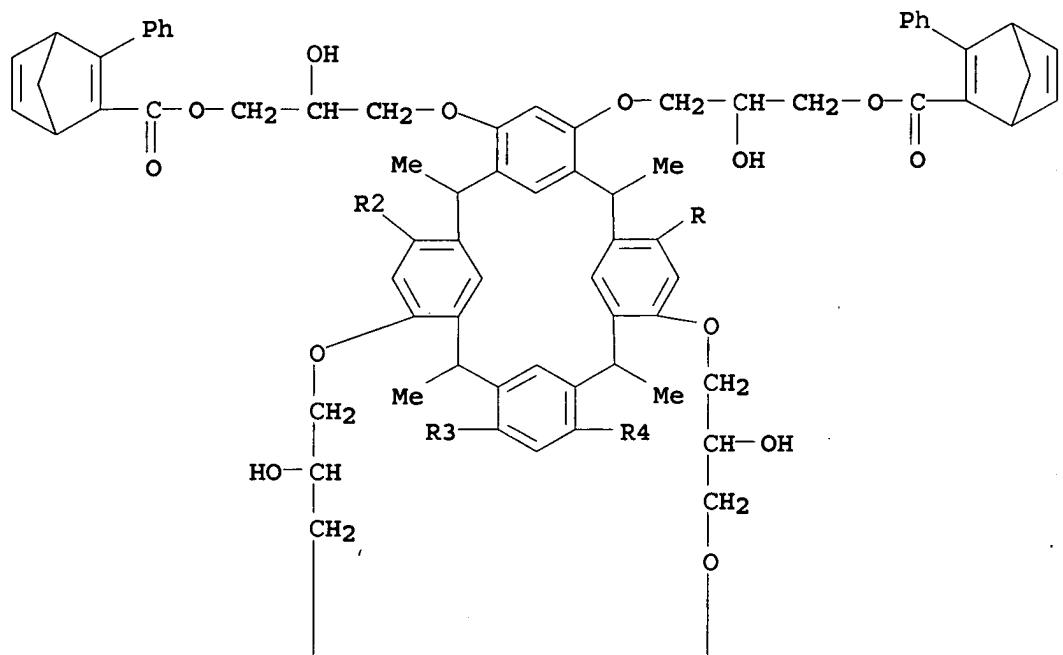
AB Calixresorcinarenes I [R1 = Q1, Q2, CH<sub>2</sub>CH(OH)CH<sub>2</sub>O<sub>2</sub>CCH:CHPh; R2 = C<sub>1</sub>-16 alkyl, C<sub>6</sub>H<sub>4</sub>-p-OR<sub>1</sub>], useful for refractive index-changing materials and light-heat energy conversion-storage materials, are manufactured by reaction of II (R<sub>3</sub> = glycidyl; R<sub>4</sub> = C<sub>1</sub>-16 alkyl, C<sub>6</sub>H<sub>4</sub>-p-OR<sub>3</sub>) with 3-phenyl-2,5-norbornadiene-2-carboxylic acid (PNC), 2-(benzofuran-2-yl)-7,7-dimethyl-3-(5-carboxythiophen-2-yl)-5,6-bis(trifluoromethyl)-2,5-norbornadiene, or cinnamic acid. Resorcinol was treated with paraldehyde to give C-methyl-calixresorcin[4]arene, which was etherified with epibromohydrin in NMP in the presence of Cs<sub>2</sub>CO<sub>3</sub> and tetrabutylammonium bromide (TBAB) at 50° for 48 h to give C-methyl-25,29,33,37,41,45,49,52-octakis(glycidyloxy)calixresorcin[4]arene II (R<sub>3</sub> = glycidyl, R<sub>4</sub> = Me) (III) in 60% yield. III was esterified with PNC in NMP in the presence of TBAB at 70° for 48 h to give I (R<sub>1</sub> = Q<sub>1</sub>, R<sub>2</sub> = Me) (IV) in 40% yield. IV was converted from the norbornadiene structure into the quadricyclane structure by photoisomerization and showed refractive index 1.683 and 1.633 before and after 20-min UV irradiation with a 250-W Hg lamp, resp., heat storage 85.5 kJ/mol (231 J/g), and 5% weight-loss temperature 344.0°.

IT 760213-79-4P 760978-04-9P.  
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)

RN 760213-79-4 HCAPLUS

CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-phenyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis[oxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

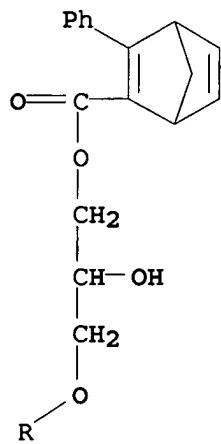
PAGE 1-A



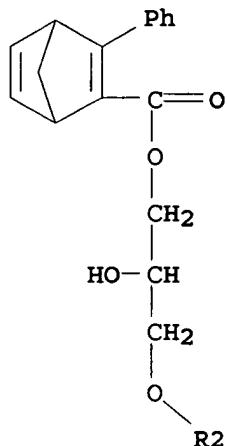
PAGE 2-A



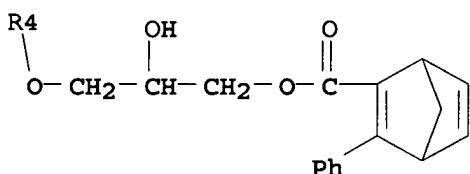
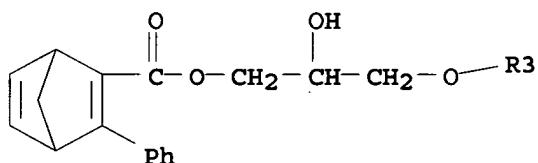
PAGE 3-A



PAGE 4-A



PAGE 5-A



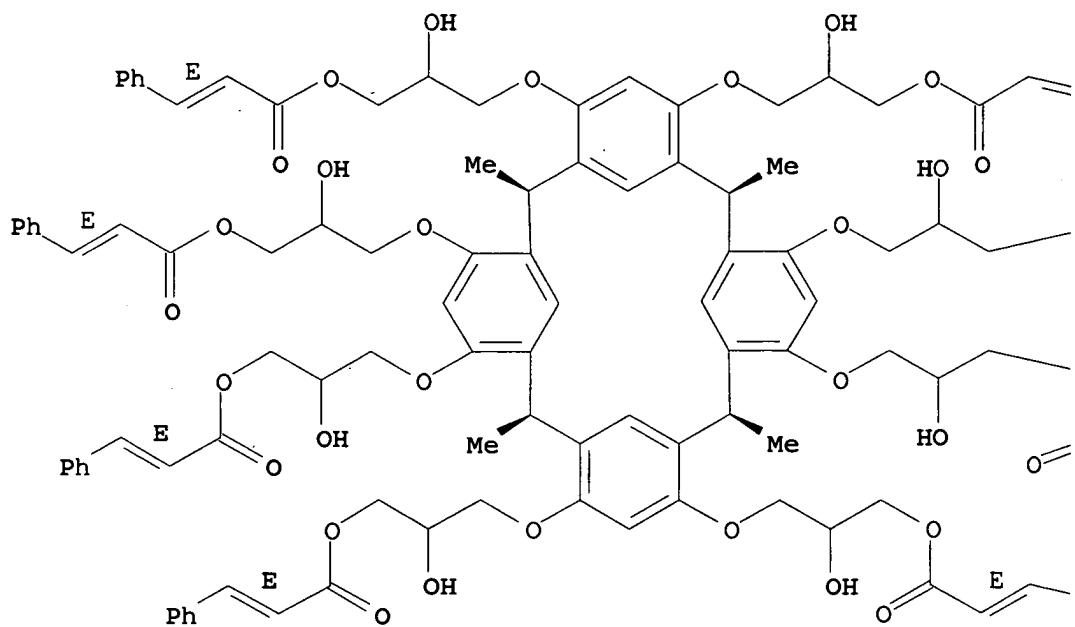
RN 760978-04-9 HCPLUS

CN 2-Propenoic acid, 3-phenyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.3,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis [oxy(2-hydroxy-3,1-propanediyl)] ester, stereoisomer (9CI) (CA INDEX NAME)

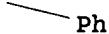
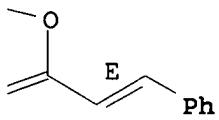
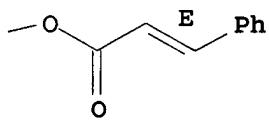
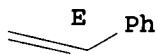
Relative stereochemistry.

Double bond geometry as shown.

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PAGE 1-B



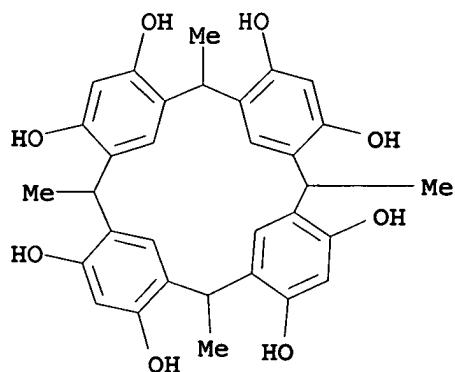
IT 65338-98-9P 343784-07-6P

(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)

RN 65338-98-9 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-

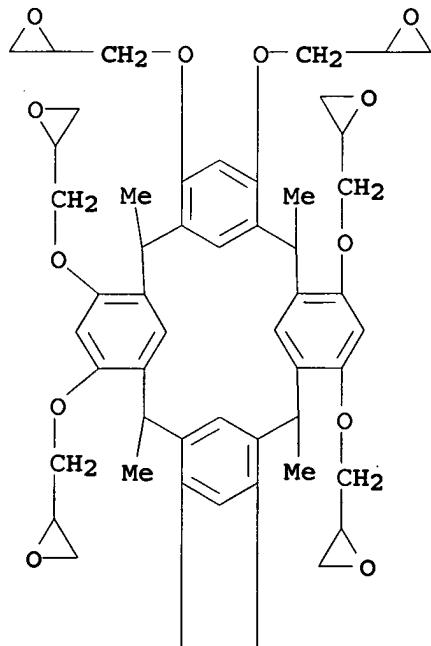
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



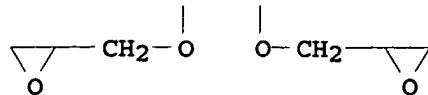
RN 343784-07-6 HCPLUS

CN Oxirane, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl)octakis(oxymethylene)]octakis- (CA INDEX NAME)

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IC ICM C07C069-753  
 ICS C07C069-003; C07C069-618; C07D409-08  
 CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 28, 52, 73.  
 IT Heat storage  
 Heat-resistant materials  
 Refractive index  
 Solar collectors  
 (preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)  
 IT 760213-79-4P 760213-80-7P 760978-04-9P  
 760978-05-0P 761459-25-0P 761459-27-2P  
 (preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)  
 IT 65338-98-9P 176897-13-5P 203714-14-1P 343784-07-6P  
 760213-81-8P 760213-82-9P  
 (preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)

L44 ANSWER 3 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:355223 HCPLUS

DOCUMENT NUMBER: 140:383102

TITLE: Photoresist base material, method for purification thereof, and photoresist compositions containing the same

INVENTOR(S): Ueda, Mitsuru; Ishii, Hirotoshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004036315	A1	20040429	WO 2003-JP11137	20030901
WO 2004036315	B1	20040603		<--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
JP 2004191913	A	20040708	JP 2003-112458	20030417

AU 2003261865	A1	20040504	AU 2003-261865	20030901
EP 1553451	A1	20050713	EP 2003-808872	20030901
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1688939	A	20051026	CN 2003-824240	20030901
<--				
US 2005271971	A1	20051208	US 2005-531208	20050414
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PRIORITY APPLN. INFO.:			JP 2002-300144	A 20021015
<--				
			JP 2003-112458	A 20030417
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			WO 2003-JP11137	W 20030901
<--				

OTHER SOURCE(S): MARPAT 140:383102

ED Entered STN: 30 Apr 2004

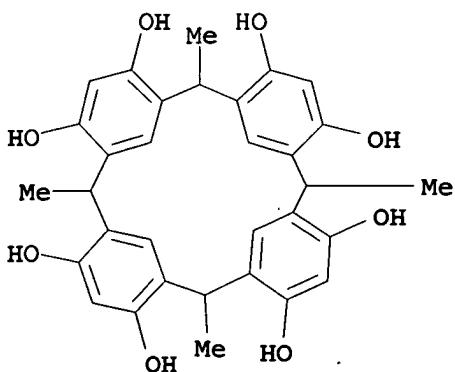
AB The invention relates to photoresist base materials consisting of extreme UV sensitive-organic compds. represented by the general formula (B-X)<sub>1</sub>(C-Y)<sub>m</sub>(D-Z)<sub>n</sub>A: [wherein A is a central structure consisting of an aliphatic group having C1-50, an aromatic group having C6-50 carbon, an organic group bearing both, or an organic group having a cyclic structure formed by repetition of these groups; B to D are each an extreme UV sensitive group, a group exhibiting a reactivity on the action of a chromophore sensitive to extreme UV rays, a C1-50 aliphatic or C6-50 aromatic group having such a group, an organic group having both groups, or a substituent having a branched structure; X to Z are each a single bond or an ether linkage; 1 to n are integers of 0-5 satisfying the relationship: 1 + m + n <u></u> 1; and A to D may each have a heteroatom-bearing substituent]. The invention provides photoresist base materials and photoresist compns. which enable ultrafine lithog. with extreme UV rays or the like and is suitable for use in semiconductor device fabrication.

IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers  
211427-64-4P 683227-74-9P

(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

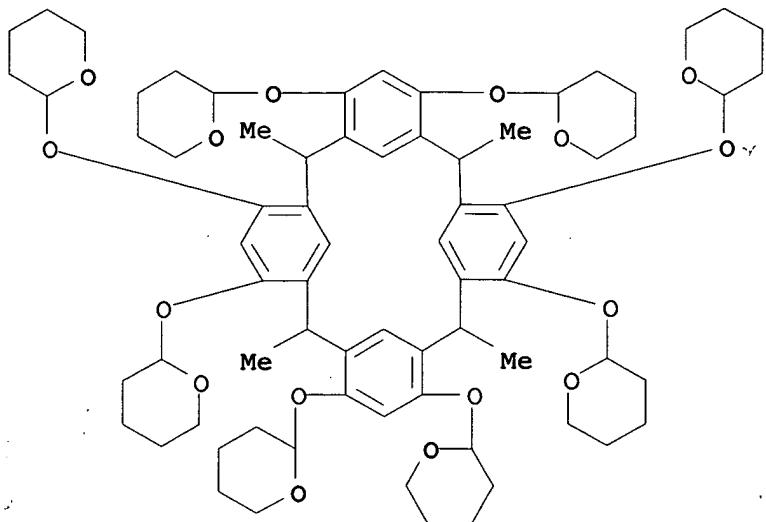
RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 211427-64-4 HCAPLUS

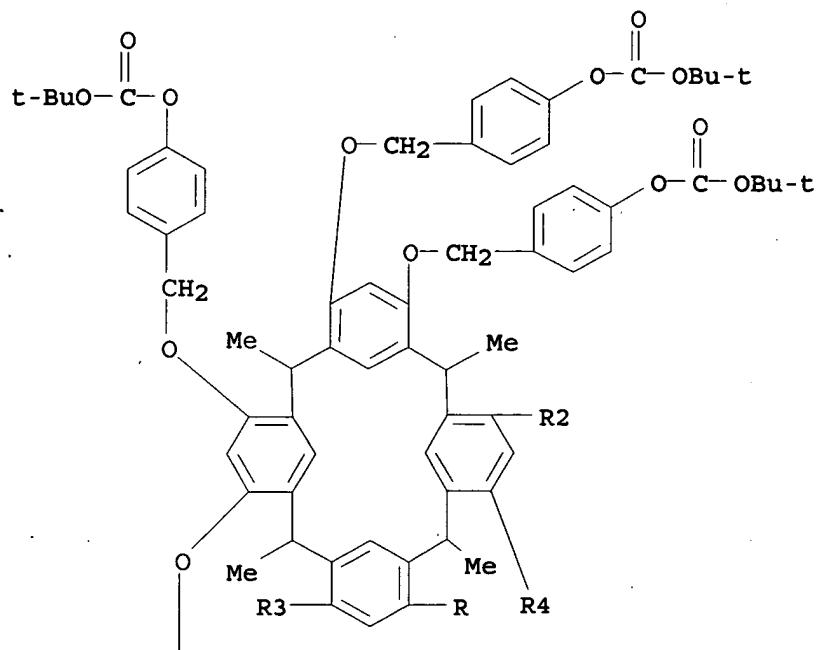
CN 2H-Pyran, 2,2',2'',2''',2'''',2''''',2''''''-[ (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis[tetrahydro- (9CI) (CA INDEX NAME)



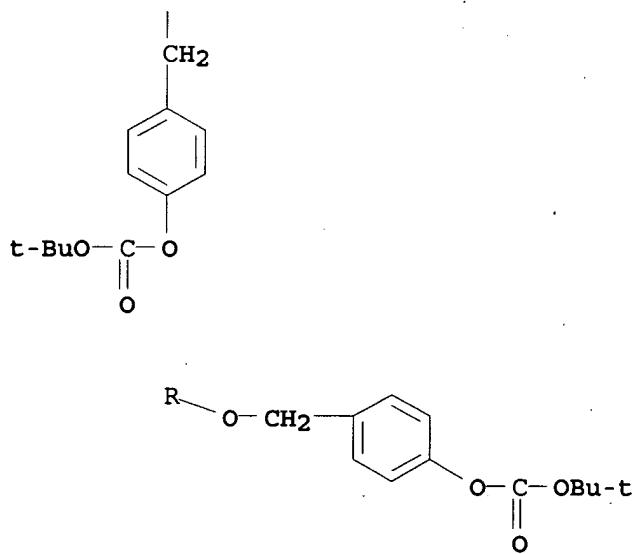
RN 683227-74-9 HCAPLUS

CN Carbonic acid, (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxymethyl-4,1-phenylene)octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

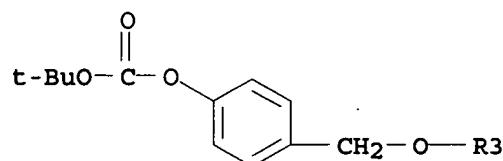
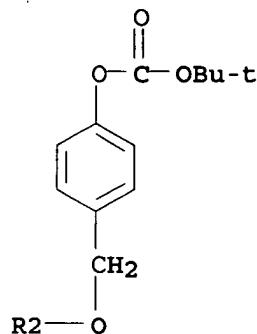
PAGE 1-A



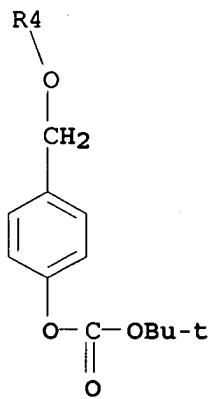
PAGE 2-A



PAGE 3-A



PAGE 4-A



IC ICM G03F007-039  
 ICS C07C039-17; C07C069-736; C07D309-04  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reproductive Processes)  
     Section cross-reference(s): 76  
 ST photoresist compn  
 IT Light-sensitive materials  
     Photoresists  
     Recrystallization  
     Semiconductor device fabrication  
         (photoresist base material, method for purification thereof,  
         and photoresist compns. containing the same)  
 IT Distillation  
     (vacuum; photoresist base material, method for purification)

thereof, and photoresist compns. containing the same)  
 IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers  
 125748-07-4P, Calix[4]resorcinarene 211427-64-4P  
 683227-72-7P 683227-73-8P 683227-74-9P 683227-75-0P  
 683227-76-1P  
 (photoresist base material, method for purification thereof,  
 and photoresist compns. containing the same)  
 IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions  
 110-87-2, Dihydro-2H-pyran 623-05-2, 4-Hydroxybenzyl alcohol  
 1927-95-3, 4-Bromophenyl acetate 5001-18-3, 1,3-Dihydroxyadamantane  
 5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl  
 dicarbonate 27955-94-8 29654-55-5, 3,5-Dihydroxybenzylalcohol  
 99181-50-7, 1,3,5-Trihydroxyadamantane  
 (photoresist base material, method for purification thereof,  
 and photoresist compns. containing the same)  
 IT 156281-11-7P, 4-(tert-Butoxycarbonyloxy)benzylalcohol  
 (photoresist base material, method for purification thereof,  
 and photoresist compns. containing the same)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

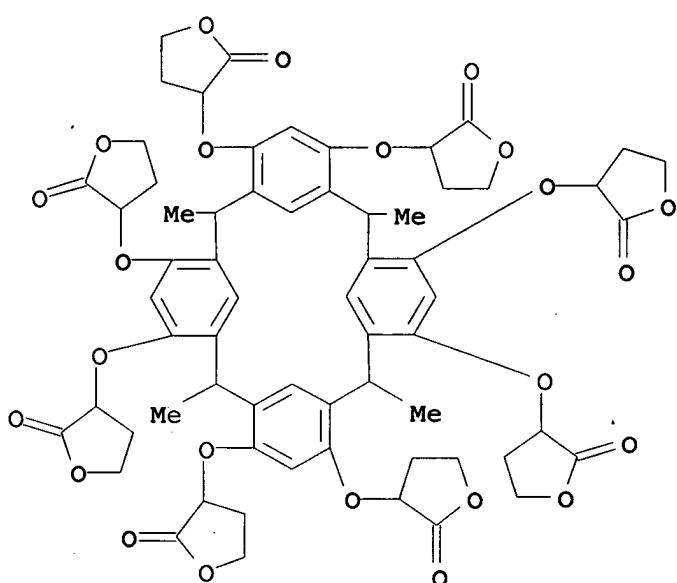
L44 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:101399 HCAPLUS  
 DOCUMENT NUMBER: 140:172186  
 TITLE: Method for producing electronic device such as  
 semiconductor device using photolithography  
 INVENTOR(S): Fukuda, Hiroshi; Yokoyama, Yoshiyuki; Hattori,  
 Takashi; Sakamizu, Toshio; Arai, Tadashi;  
 Shiraishi, Hiroshi  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: PCT Int. Appl., 79 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004012012	A1	20040205	WO 2002-JP7760	20020730 ---
W: CN, JP, KR, US RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
JP 3927575	B2	20070613	JP 2004-524096	20020730 ---
US 2006105273	A1	20060518	US 2005-523247	20050916 ---
PRIORITY APPLN. INFO.:			WO 2002-JP7760	W 20020730 ---

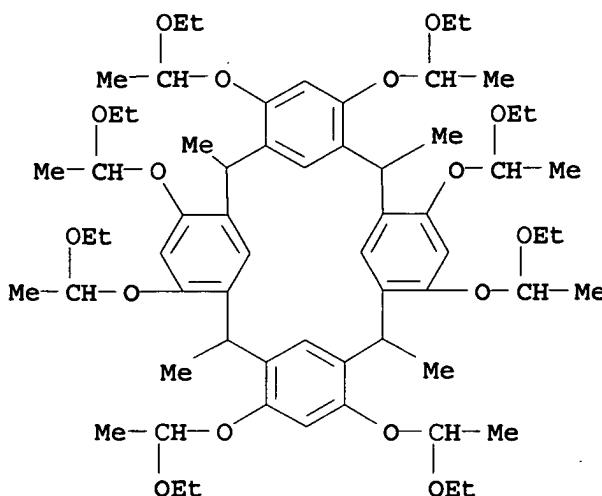
ED Entered STN: 08 Feb 2004  
 AB When the accuracy required for the dimensions of semiconductor circuit  
 pattern approaches the mol. size of resist as the pattern becomes  
 finer, device performance deteriorates due to edge roughness of the  
 resist pattern to have an adverse effect on the system performance.  
 This problem is solved by employing supermols. having smaller  
 dimensions than those of conventional polymer as a principal  
 component, making the number of reactions required for mol. solubility  
 variation constant and as large as possible, and increasing the acid

catalyst d. by including an acid generating agent in the supermol. or bonding the acid generating agent thereto. A pattern of mol. accuracy can thereby be formed with high productivity even for the pattern dimension of 50 nm or less and a high performance system can be realized.

IT 655233-37-7P  
 (method for producing electronic device)  
 RN 655233-37-7 HCAPLUS  
 CN 2 (3H)-Furanone, 3,3',3'',3''',3'''',3''''',3''''''',3'''''''-  
 [(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octyl)octakis(oxy)]octakis[dihydro- (9CI) (CA  
 INDEX NAME)



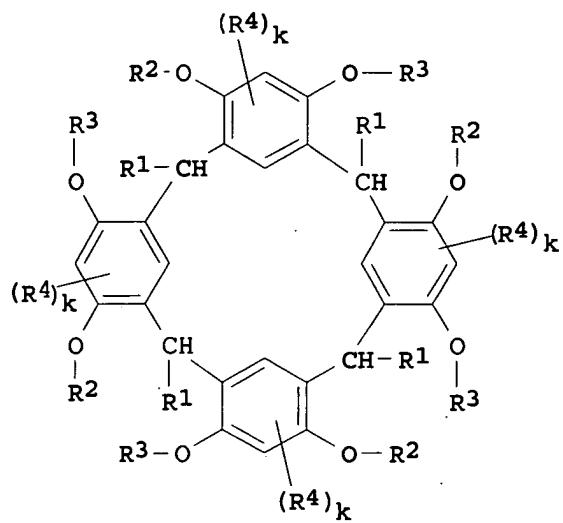
IT 655233-32-2P  
 (method for producing electronic device)  
 RN 655233-32-2 HCAPLUS  
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,  
 4,6,10,12,16,18,22,24-octakis(1-ethoxyethoxy)-2,8,14,20-tetramethyl-  
 (CA INDEX NAME)



IC ICM G03F007-039  
 ICS G03F007-004; H01L021-3213; G03F001-08; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 IT 655233-37-7P 655233-51-5P 655235-97-5P  
 (method for producing electronic device)  
 IT 99685-96-8DP, Fullerene C60, reaction product with tert-Bu bromoacetate 655233-22-0P 655233-32-2P 655233-43-5P  
 655233-47-9P 655233-59-3P 655233-66-2P 655233-79-7P  
 655233-86-6P 655233-96-8P 655235-99-7P 655236-01-4P  
 (method for producing electronic device)  
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:57508 HCAPLUS  
 DOCUMENT NUMBER: 140:112493  
 TITLE: Calix resorcinarene derivatives soluble in various solvents and their heat-resistant flat films free from crystallization  
 INVENTOR(S): Momota, Junji; Onishi, Hironori  
 PATENT ASSIGNEE(S): Tokuyama Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004018421	A	20040122	JP 2002-173350	20020613 <--
PRIORITY APPLN. INFO.:			JP 2002-173350	20020613 <--
OTHER SOURCE(S):	MARPAT	140:112493		
ED Entered STN:	23 Jan 2004			
GI				

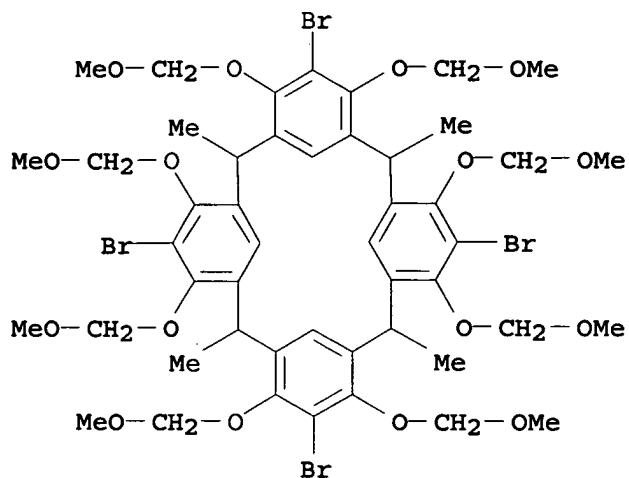


AB Calix resorcinarene derivs., useful for neg. electron beam resist materials, are represented by general formula I [R1-R3 = H, group shown as (a) C1-20 alkyl, amino, OH, aryl, aryloxy, etc., (b) C6-20 aryl, halo, amino, OH, aryl, aryloxy, etc., (c) C2-20 saturated aliphatic acyl, aromatic acyl, (d) YZ (Y = bond, divalent organic group; Z = ethenyl, halogenoalkyl); R2 ≠ R3 ≠ H; R4 = C1-20 (un)substituted alkyl halo; k = 0, 1, 2]. Thus, 0.6 mol resorcinol was reacted with 0.2 mol paraformaldehyde to yield 5 g of a white solid of an intermediate, then it (3.67 mmol) was esterified with 33 mmol methacryloyl chloride to yield 2.7 g of a white solid of I [R1 = Me, R2 = R3 = C(O)CMe:CH2; k = 0 (II)] showing good solubility in various solvents. Propylene glycol monomethyl ether solution of II gave a flat film free from crystals by spin coating on glass plate followed by drying. A mixture comprising II 50, tetraethylene glycol dimethacrylate 45,  $\alpha$ -methylstyrene 5,  $\alpha$ -methylstyrene dimer 1, and Perbutyl ND (tert-butyldperoxy neodecanoate) was cast-polymerized while heating up from 30° to 90° to give 2-mm thick test pieces showing high hardness and thermal stability.

IT 646475-11-8P 646475-16-3P 646475-31-2P  
(solvent-soluble polymerizable calix resorcinarene derivs. for neg. EB resist materials and their heat-resistant crystal-free flat films)

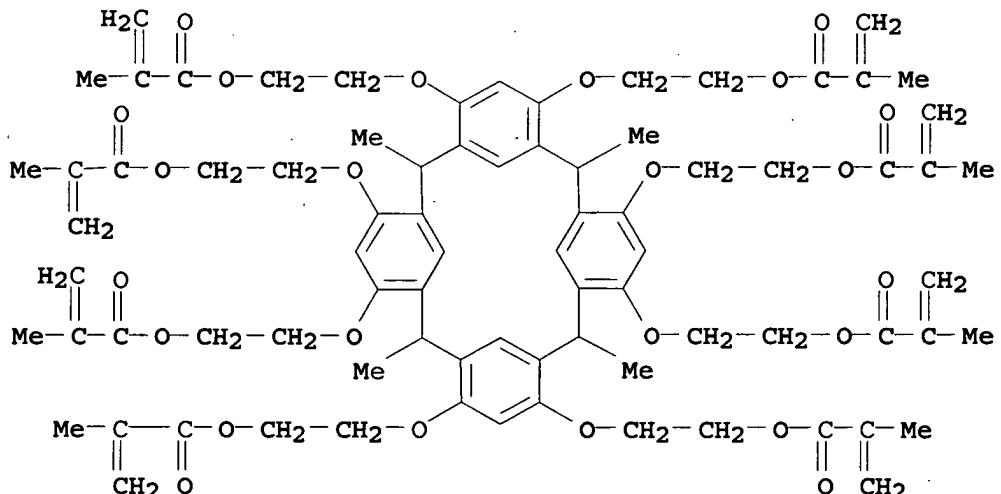
RN 646475-11-8 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 5,11,17,23-tetrabromo-4,6,10,12,16,18,22,24-octakis(methoxymethoxy)-2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 646475-16-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.3,7,19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octa-2,1-ethanediyl ester  
(9CI) (CA INDEX NAME)



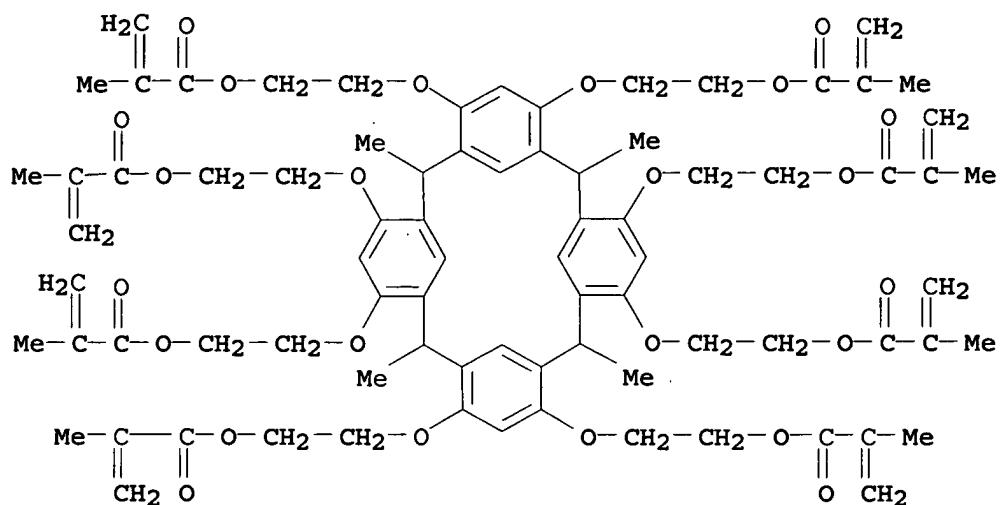
RN 646475-31-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.3,7,19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy-2,1-ethanediyl) ester, polymer with (1-methylmethenyl)benzene and oxybis(2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 646475-16-3

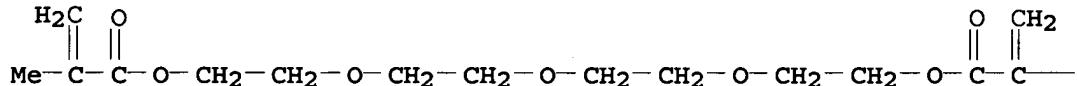
CMF C80 H96 O24



CM 2

CRN 109-17-1  
CMF C16 H26 O7

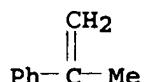
PAGE 1-A



PAGE 1-B

— Me

CM 3

CRN 98-83-9  
CMF C9 H10

IC ICM C07C069-54  
 ICS C07C043-215; C07C043-225; C07C043-307; C08F016-32; C08F020-20;  
 C08J005-18; C08L029-10; C08L033-04

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37, 74

IT 646474-80-8P 646474-81-9P 646474-83-1P 646474-87-5P  
 646474-89-7P 646474-91-1P 646474-94-4P 646474-98-8P  
 646475-02-7P 646475-08-3P 646475-11-8P 646475-14-1P  
 646475-16-3P 646475-18-5P 646475-20-9P 646475-22-1P  
 646475-24-3P 646475-26-5P 646475-29-8P 646475-31-2P  
 646475-33-4P

(solvent-soluble polymerizable calix resorcinarene derivs. for neg. EB resist materials and their heat-resistant crystal-free flat films)

L44 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:879781 HCAPLUS

DOCUMENT NUMBER: 139:388462

TITLE: tert-Butoxycarbonylalkoxycalixresorcinarenes  
 having high solubility in casting solvents and  
 radiation-sensitive positive resists containing  
 the same

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

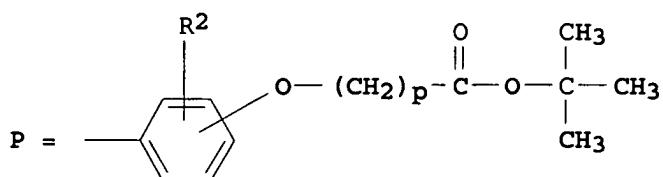
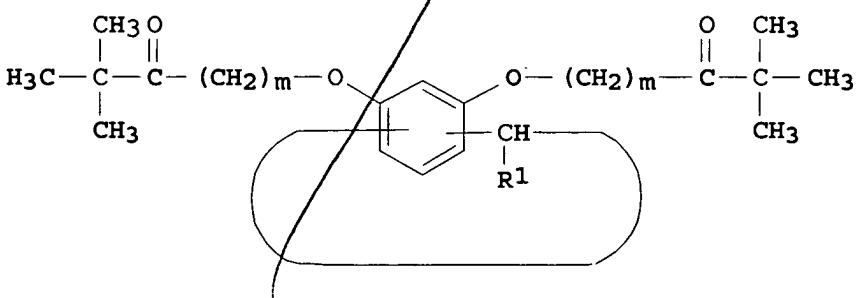
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003321423	A	20031111	JP 2002-133996	20020509

PRIORITY APPLN. INFO.:	DATE	DATE
	JP 2002-133996	20020509

OTHER SOURCE(S): MARPAT 139:388462

ED Entered STN: 11 Nov 2003

GI



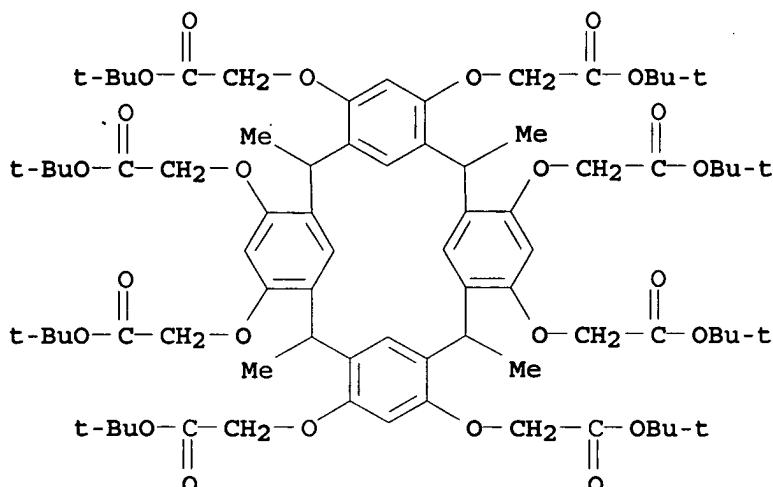
AB The compds. I (R1 = C1-18 alkyl, P; R2 = H, C1-15 alkoxy; m, p = 0-2; n = 4-12) and resists containing I and radiation-sensitive acid generators are sep. claimed. The resists produce high-resolution patterns for fabrication of integrated circuits.

IT 623159-10-4P

(tert-butoxycarbonylalkoxycalixresorcinarenes having high solvent solubility for liable pos.-working radiation-sensitive resists)

RN 623159-10-4 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl)octakis(oxy)octakis-, octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-712

ICS C08G061-02; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

IT 623159-05-7P 623159-06-8P 623159-07-9P 623159-08-0P

623159-10-4P 623159-12-6P 623159-13-7P 623159-14-8P

623159-15-9P

(tert-butoxycarbonylalkoxycalixresorcinarenes having high solvent solubility for liable pos.-working radiation-sensitive resists)

L44 ANSWER 7 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:850922 HCPLUS

DOCUMENT NUMBER: 140:391316

TITLE: Effective Synthesis of  $\beta$ -Ketophosphonate Derivatives of Calix[4]resorcinolarenes

AUTHOR(S): Prosvirkin, A. V.; Kazakova, E. Kh.; Habicher, V. L.; Fedorenko, S. V.; Mustafina, A. R.; Konovalov, A. I.

CORPORATE SOURCE: Kazan Research Center, Arbuzov Institute of Organic Chemistry, Russian Academy of Sciences, Tatarstan, Kazan, Russia

SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2003), 73(6), 918-920

CODEN: RJGCEK; ISSN: 1070-3632  
 PUBLISHER: MAIK Nauka/Interperiodica Publishing  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 140:391316

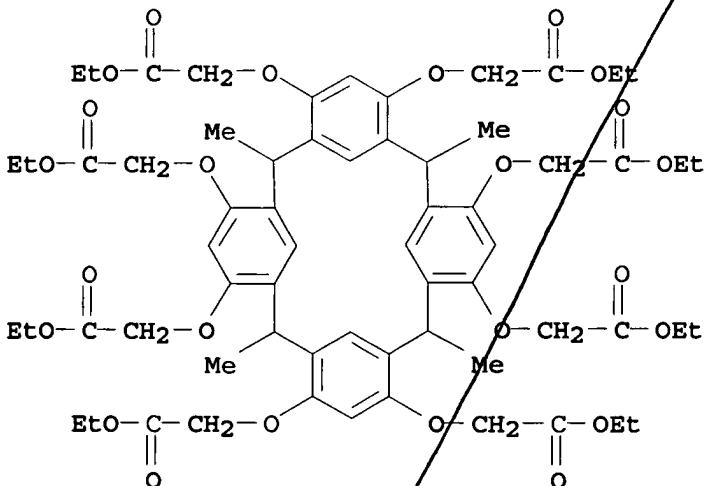
ED Entered STN: 30 Oct 2003

AB An effective method for introduction of  $\beta$ -phosphonate fragments to a calix[4]resorcinarene matrix is described. Reaction of LiCH<sub>2</sub>PO(OMe)<sub>2</sub> with hydroxyacetate ethers of calix[4]resorcinarenes afforded 2,8,14,20-R4-4,6,10,12,16,18,22,24-R18-calix[4]resorcinarenes (3, 4; R = Me, C<sub>8</sub>H<sub>17</sub>; R<sub>1</sub> = OCH<sub>2</sub>COCH<sub>2</sub>PO(OMe)<sub>2</sub>), which were tested as lanthanum extraction agents. The effectiveness of 3 for extraction of lanthanum ions from water to chloroform in the presence of picrate ions was demonstrated.

IT 171799-35-2  
 (phosphonylation; preparation and lanthanum extraction ability of  $\beta$ -ketophosphonate calix[4]resorcinarene derivs.)

RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)octakis-, 1,1',1'',1''',1''''',1''''''',1'''''''-octaethyl ester (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 25

IT 171799-35-2 685702-03-8  
 (phosphonylation; preparation and lanthanum extraction ability of  $\beta$ -ketophosphonate calix[4]resorcinarene derivs.)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:867239 HCAPLUS

DOCUMENT NUMBER: 137:377437

TITLE: Positive working radiation polymerizable compositions

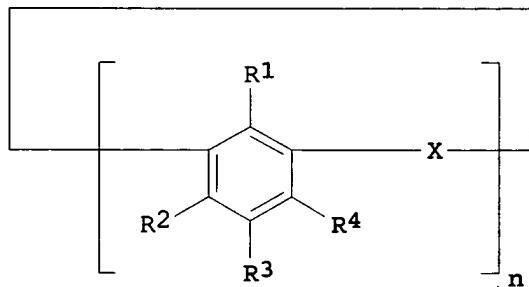
INVENTOR(S) : Ueda, Mitsuru; Shibasaki, Yuji; Fujigaya, Takehiko; Kwon, Yong Gil  
 PATENT ASSIGNEE(S) : Jsr Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002328473	A	20021115	JP 2001-134962	20010502
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PRIORITY APPLN. INFO.:			JP 2001-134962	20010502
<--				

OTHER SOURCE(S) : MARPAT 137:377437

ED Entered STN: 15 Nov 2002

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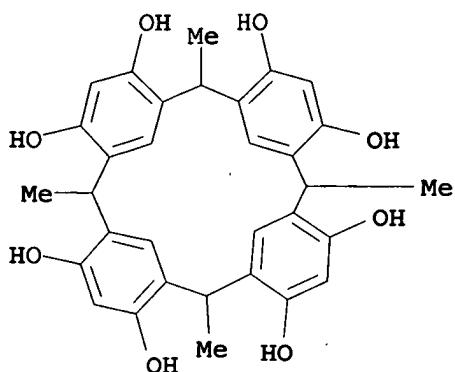
I

AB The compns. comprise (A) cyclic polyphenolic compds. I (R1-4 = H, OH, halo, alkyl, aryl, aralkyl, alkoxy, alkenyl, acyl, alkoxy carbonyl, alkyloxy, aryloxy, cyano, nitro;  $\geq 1$  of R1-4 is tert-butoxycarbonyloxy; X = direct bond, CR5R6; R5-6 = H, alkyl, aryl; n = integer of 3-8) and (B) radiation-sensitive acid generators. The compns. have high resolution and high sensitivity.

IT 65338-98-9DP, tert-butoxycarbonyl derivs. 65338-98-9P  
 (calixarene-acid generator compns. for pos.-working photoresists)

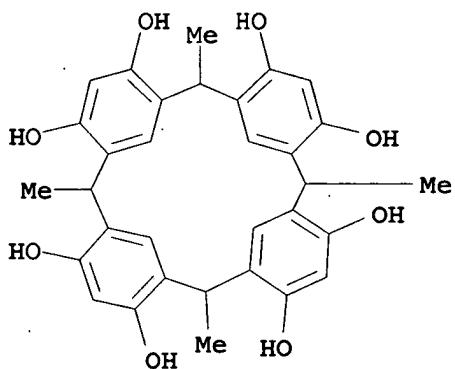
RN 65338-98-9 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)

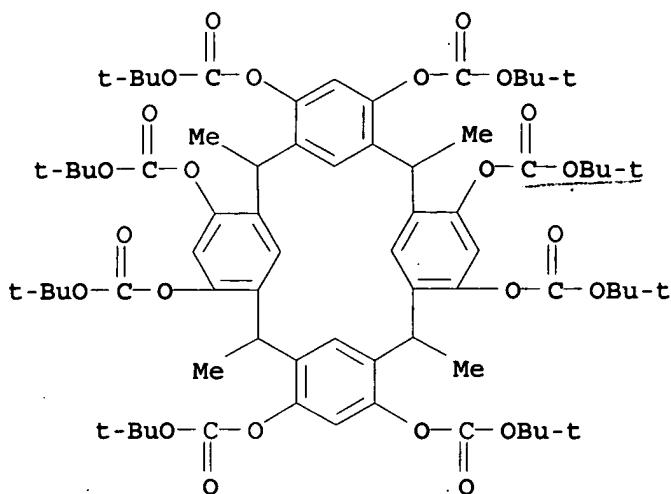


IT 250715-31-2P

(calixarene-acid generator compns. for pos.-working photoresists)

RN 250715-31-2 HCAPLUS

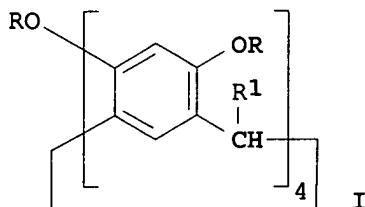
CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM G03F007-039  
 ICS G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST methylcalixresorcinarene acid generator pos photoresist;  
 calixarene acid generator compn pos photoresist  
 IT Positive photoresists  
 (calixarene-acid generator compns. for pos.-working photoresists)  
 IT 65338-98-9DP, tert-butoxycarbonyl derivs. 65338-98-9P  
 (calixarene-acid generator compns. for pos.-working photoresists)  
 IT 250715-31-2P  
 (calixarene-acid generator compns. for pos.-working photoresists)  
 IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions 24424-99-5, Di-tert-butyl dicarbonate  
 (calixarene-acid generator compns. for pos.-working photoresists)  
 IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate  
 (radiation-sensitive acid generator; calixarene-acid generator compns. for pos.-working photoresists)

L44 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:737648 HCAPLUS  
 DOCUMENT NUMBER: 138:237886  
 TITLE: Synthesis of methylene-bridged cyclic resorcinol oligomer  
 AUTHOR(S): Li, Daixin; Yamagishi, Tadaaki; Nakamoto, Yoshiaki  
 CORPORATE SOURCE: Graduate School of Natural Science and Technology,  
 Kanazawa University, Kanazawa, 920-8867, Japan  
 SOURCE: Nettowaku Porima (2002), 23(3), 134-141  
 CODEN: NPORF2; ISSN: 1342-0577  
 PUBLISHER: Gosei Jushi Kogyo Kyokai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese  
 OTHER SOURCE(S): CASREACT 138:237886  
 ED Entered STN: 30 Sep 2002  
 GI



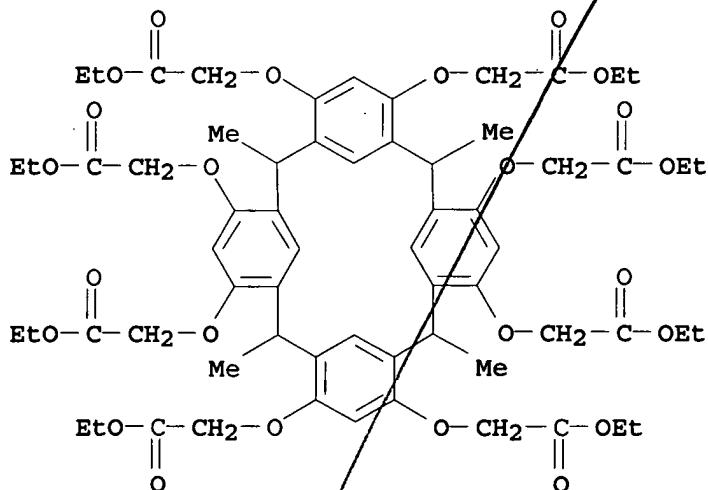
AB A convenient synthesis of methylene-bridged cyclic resorcinol oligomers (calix[4]resorcinarene) (I; R = H, CH<sub>2</sub>CO<sub>2</sub>Me; R<sub>1</sub> = H, Me) was reported. First, calix[4]resorcinarene octamethyl ether I (R = Me, R<sub>1</sub> = H) was prepared by the HCl-catalyzed condensation of 1,3-dimethoxybenzene with paraformaldehyde in ethylene glycol monoethyl ether. The MeO group was easily converted to OH group by treatment with BBr<sub>3</sub> in CHCl<sub>3</sub>. In <sup>1</sup>H NMR spectra, each proton signal of these compds. is singlet. A novel ionophore based on calix[4]resorcinarene octaester I (R = CH<sub>2</sub>CO<sub>2</sub>Me, R<sub>1</sub> = H) was prepared. The ionophore showed higher affinity for larger alkali cations, K<sup>+</sup>, Rb<sup>+</sup>, and Cs<sup>+</sup>, than for smaller ones, Na<sup>+</sup> and Li<sup>+</sup>. The ionophore based on C-methylated calix[4]resorcinarene I (R = CH<sub>2</sub>CO<sub>2</sub>Me, R<sub>1</sub> = Me) which was synthesized from resorcinol with acetaldehyde, on the contrary, did not bind alkali cations.

IT 171799-35-2P

(synthesis of methylene-bridged cyclic resorcinol oligomer)

RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, 1,1',1'',1''',1''''',1''''''',1'''''''-1'''''''-octaethyl ester (CA INDEX NAME)

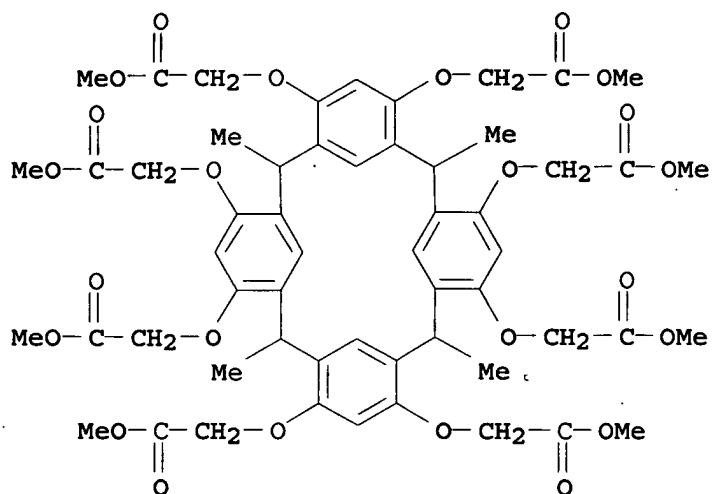


CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT 171799-35-2P

(synthesis of methylene-bridged cyclic resorcinol oligomer)

L44 ANSWER 10 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:283936 HCPLUS  
 DOCUMENT NUMBER: 138:304638  
 TITLE: Synthesis and photochemical reaction of cyclic oligomers: Synthesis and photopolymerization of novel C-methylcalix[4]resorcinarene and p-alkylcalix[n]arene derivatives containing spiro ortho ether groups  
 AUTHOR(S): Nishikubo, Tadatomi; Kameyama, Atsushi; Kudo, Hiroto; Tsutsui, Kousuke  
 CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Engineering, Kanagawa University, Yokohama, 221-8686, Japan  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2002), 40(9), 1293-1302  
 CODEN: JPACCEC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 16 Apr 2002  
 AB New photoreactive calixarene derivs. containing spiro ortho ester groups were synthesized by the reaction of 2-bromomethyl-1,4,6-trioxaspiro[4.4]nonane with 2,8,14,20-tetramethyl-4,6,10,12,16,18,22,24-octakis(carboxymethoxy)calix [4]resorcinarene, 5,11,17,23,29,35-hexamethyl-37,38,39,40,41,42-hexakis-(carboxymethoxy)calix [6]arene, and 5,11,17,23,29,35,41,47-octa-tert-butyl-49,50,51,52,53,54,55,56-octakis-(carboxymethoxy)calix[8]arene, which were prepared by the reaction of C-methylcalix[4]resorcinarene, p-methylcalix[6]arene, and p-tert-butylcalix[8]arene, resp. The thermal stability of the obtained calixarene derivs. containing spiro ortho ester groups was examined with thermogravimetric anal., and it was found that these calixarene derivs. had good thermal stability. The photoinitiated cationic polymerization of spiro ortho ester groups in calixarene derivs. was examined with certain photoacid generators in the film state. Interestingly enough, the reaction of calixarene derivs. did not proceed with only photoirradn.; however, the reaction proceeded smoothly when the photoirradn. was followed by heating. The calixarene composed of a C-methylcalix[4]resorcinarene structure showed the highest photochem. reactivity in this reaction system.  
 IT 203063-80-3P  
 (in preparation of spiro ortho ester calixarene derivs.)  
 RN 203063-80-3 HCPLUS  
 CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octamethyl ester (9CI) (CA INDEX NAME)



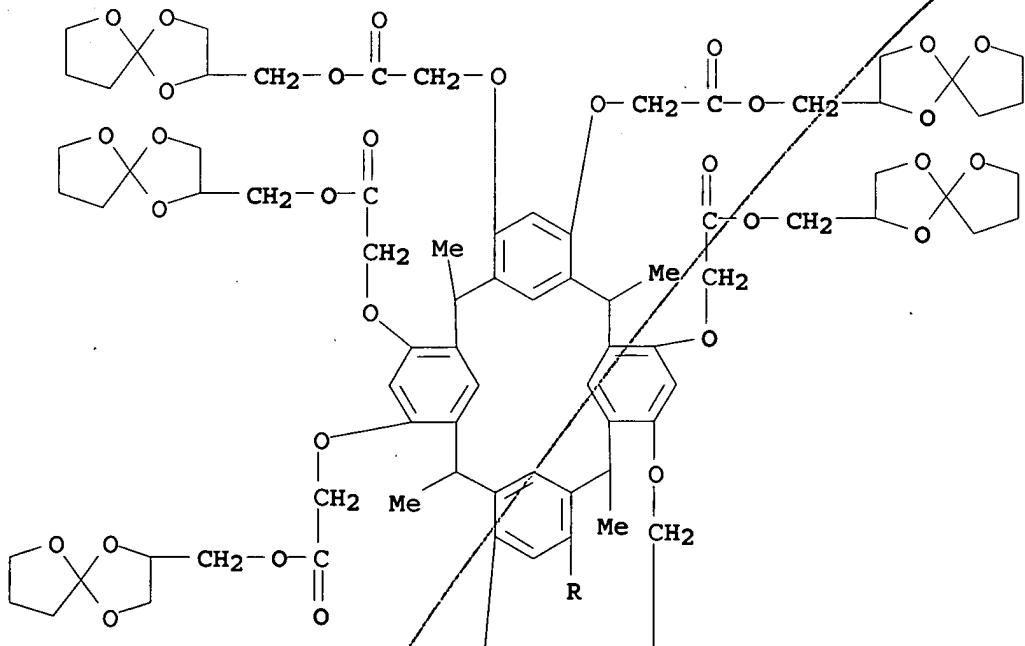
IT 294182-92-6P

(preparation and cationic photopolymn. of)

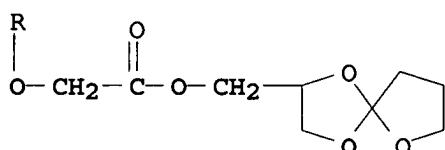
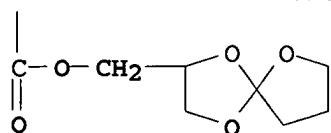
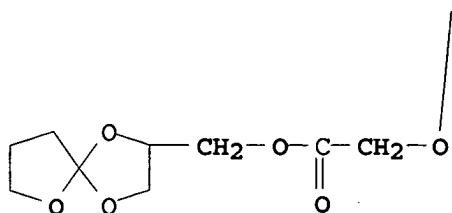
RN 294182-92-6 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octetyl)octakis(oxy)octakis(octakis(1,4,6-trioxaspiro[4.4]nonan-2-ylmethyl) ester (9CI) (CA INDEX NAME)

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IT 294182-95-9P

(preparation by photopolymer.)

RN 294182-95-9 HCAPLUS

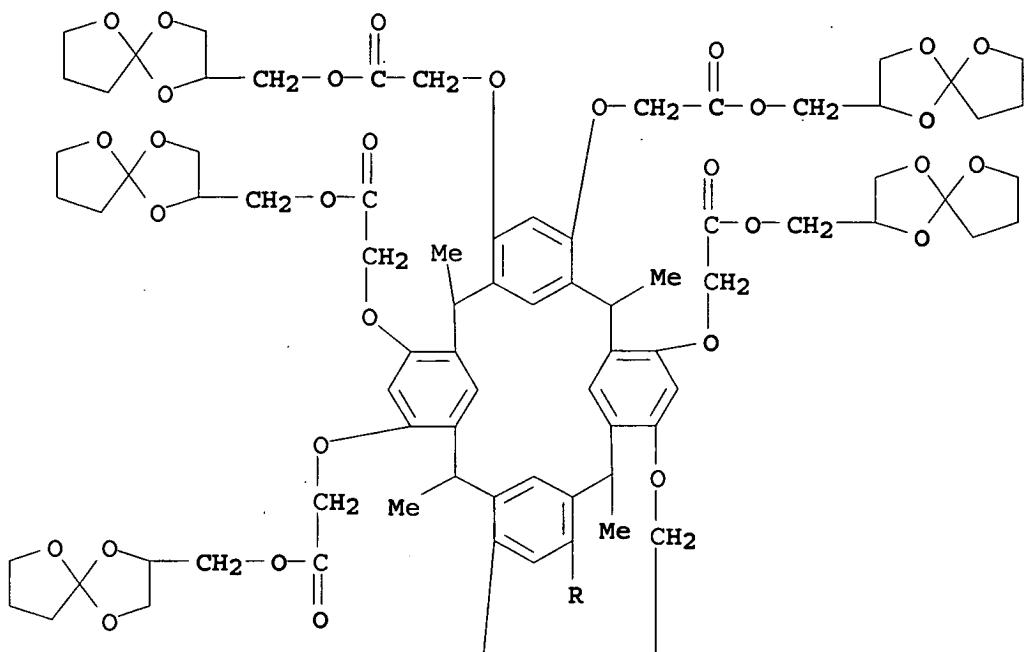
Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2''''''''-[ (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octakis(1,4,6-trioxaspiro[4.4]non-2-ylmethyl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

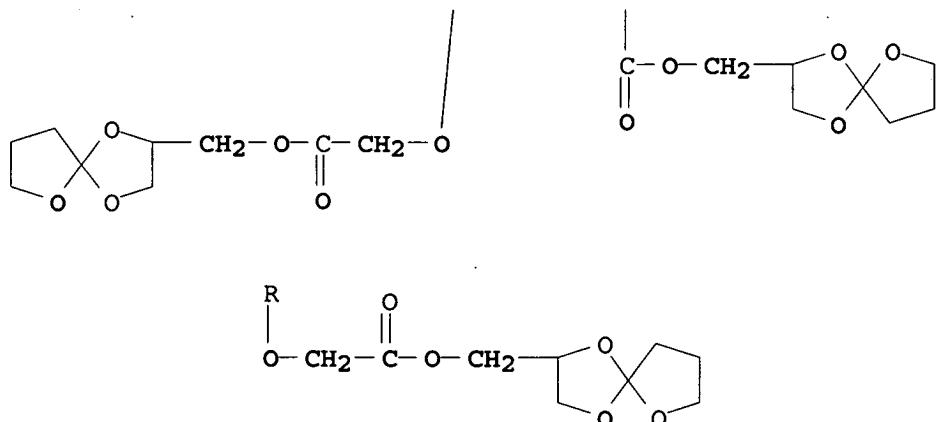
CRN 294182-92-6

CMF C104 H128 Q48

PAGE 1-A



PAGE 2-A



CC 35-7 (Chemistry of Synthetic High Polymers)  
 IT 65338-98-9P 84298-07-7P 130508-38-2P 203063-80-3P  
 508183-49-1P 508183-51-5P 508183-54-8P 508183-55-9P  
 (in preparation of spiro ortho ester calixarene derivs.)  
 IT 294182-92-6P 508183-57-1P 508183-59-3P  
 (preparation and cationic photopolymn. of)  
 IT 294182-95-9P 508217-77-4P 508217-78-5P  
 (preparation by photopolymn.)

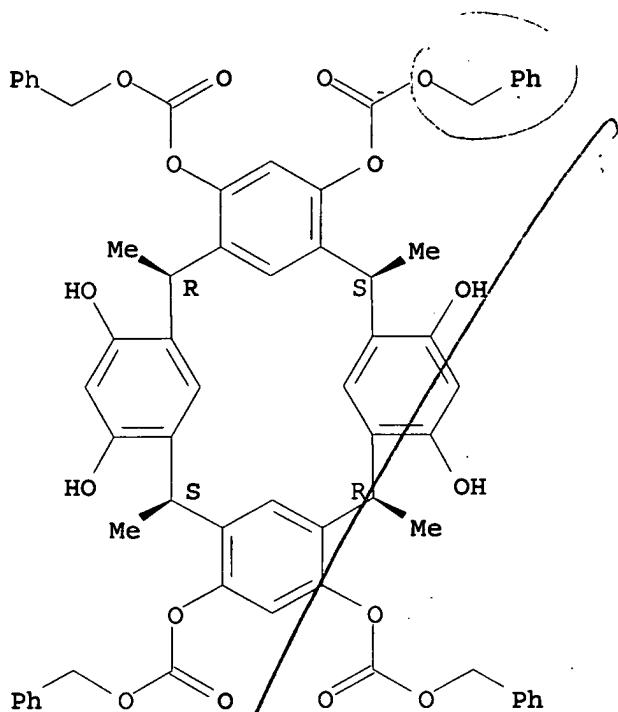
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L44 ANSWER 11 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:259517 HCPLUS  
 DOCUMENT NUMBER: 137:20207  
 TITLE: Rigid Tetranitroresorcinarenes  
 AUTHOR(S): Shvanyuk, Alexander; Far, Adel Rafai; Rebek, Julius, Jr.  
 CORPORATE SOURCE: The Skaggs Institute for Chemical Biology and The Department of Chemistry, The Scripps Research Institute, La Jolla, CA, 92037, USA  
 SOURCE: Organic Letters (2002), 4(9), 1555-1558  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 137:20207  
 ED Entered STN: 09 Apr 2002  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB O-Alkylation of C<sub>2</sub>V-sym. resorcinarene tetraesters, e.g., I (X = COPh) with 2 equiv of 1,3-difluoro-4,6-dinitrobenzene readily affords conformationally rigid octanitro resorcinarene, e.g., II, which is a potential scaffold for the design of supramol. structures.  
 IT 213666-71-8 (preparation of rigid tetranitroresorcinarenes via O-alkylation of resorcinarene tetraesters with difluorodinitrobenzene)  
 RN 213666-71-8 HCPLUS  
 CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrail tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
IT 327-92-4, 1,3-Difluoro-4,6-dinitrobenzene 213666-71-8  
218436-19-2 351859-91-1 371773-18-1 434286-54-1 434286-55-2  
(preparation of rigid tetrinitroresorcinarenes via O-alkylation of  
resorcinarenes with difluorodinitrobenzene)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 12 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:891146 HCAPLUS

DOCUMENT NUMBER: 136:270357

TITLE: A positive-working alkaline developable photoresist based on partially tert-Boc-protected calix[4]resorcinarene photoacid generator

AUTHOR(S) : Young-Gil, Kwon; Kim, Jin Baek; Fujigaya, Tsuyohiko; Shibasaki, Yuji; Ueda, Mitsuru

CORPORATE SOURCE: Department of Chemistry, Korea Advanced Institute of Science & Technology, Yusong-ku, Taejon, 305-701, S. Korea

SOURCE: Journal of Materials Chemistry (2002), 12(1), 53-57

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal  
PUBLISHER: English

LANGUAGE: English

ED Entered STN: 11 Dec 2001  
AB A pos. working low-mol.-weight **photoresist** based on partially t-Boc protected tetra-C-methylcalix[4]resorcinarene (t-Boc C-4-R) and a photoacid generator (PAG), diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate (DIAS) was developed. t-Boc C-4-Rs were prepared by the reaction of C-4-R with di-CMe3 dicarbonate in the presence of 4-dimethylaminopyridine (DMAP). A clear film cast from a 20% t-Boc

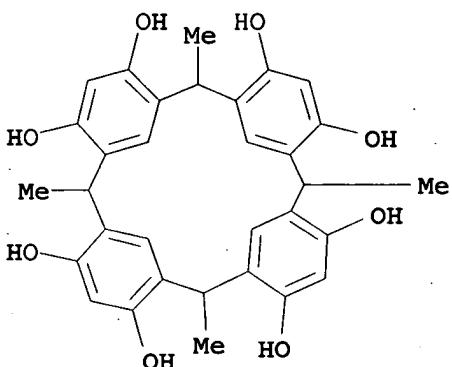
C-4-R solution in cyclohexanone showed high transparency to UV >300 nm. The appropriate t-Boc protecting ratio was .apprx.60 mol% in view of adhesion, deprotection temperature and dissoln. rate. The photoresist consisting of 60 mol% t-Boc C-4-R (95%) and DIAS (5%) showed a sensitivity of 13 mJ cm<sup>-2</sup> and a contrast of 12.6 when it was exposed to 365 nm light and post-baked at 105° for 90 s, followed by developing with a 2.38% aqueous Me4NOH (TMAH) solution at room temperature. A fine pos. image featuring 1.5 μm of min. line and space patterns was observed on the film of the photoresist exposed to 40 mJ cm<sup>-2</sup> of UV-light at 365 nm by the contact mode.

IT 65338-98-9P 250715-31-2P

(pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

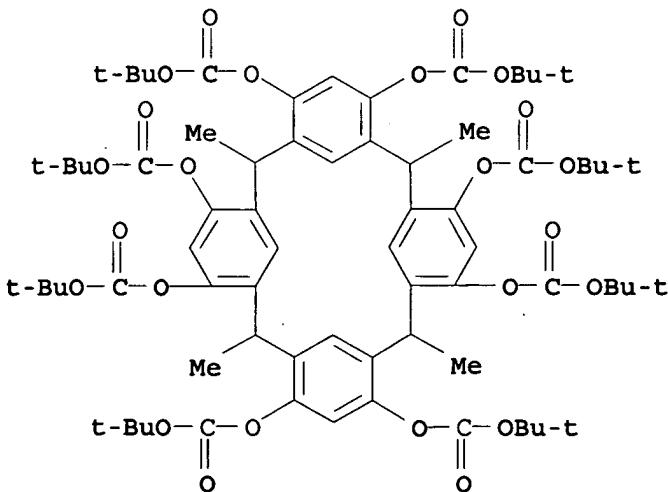
RN 65338-98-9 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 250715-31-2 HCPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST pos working photoresist butoxycarbonyl protected calixarene photoacid generator  
 IT Dissolution  
**Positive photoresists**  
 (pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)  
 IT 75-07-0, Acetaldehyde, reactions 77-78-1 108-46-3, 1,3-Benzenediol, reactions 1122-58-3 1483-72-3 16106-40-4 34619-03-9 67580-39-6  
 (pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)  
 IT 75-59-2P 65338-98-9P 250715-31-2P  
 (pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)  
 IT 999-97-3  
 (silicon wafer coated with; pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)  
 IT 405263-63-0  
 (silicon wafer coated with; pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

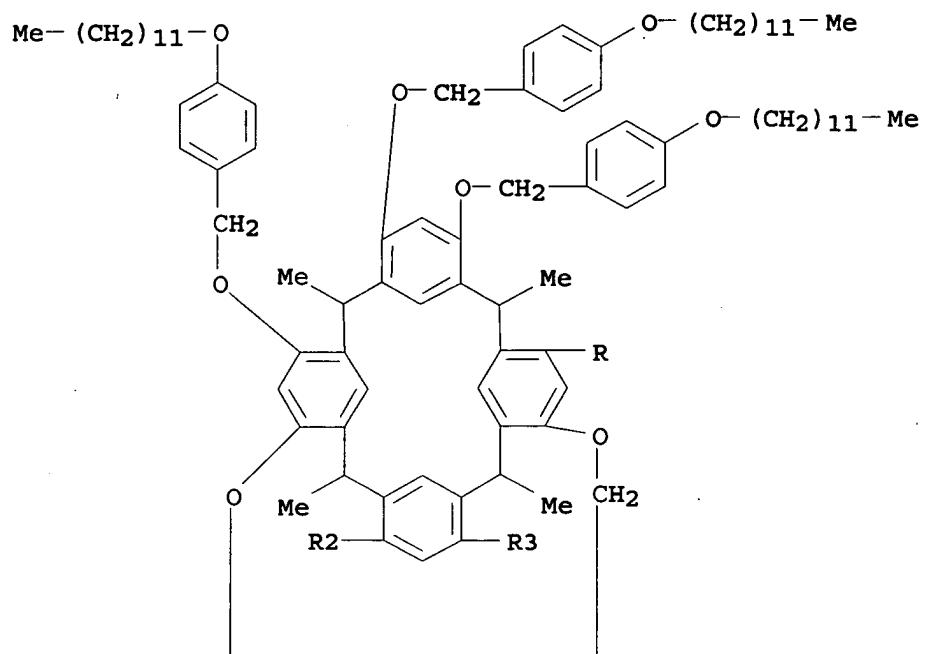
L44 ANSWER 13 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:348148 HCPLUS  
 DOCUMENT NUMBER: 135:107762  
 TITLE: The influence of molecular architecture and solvent type on the size and structure of poly(benzyl ether) dendrimers by SANS  
 AUTHOR(S): Evmenenko, Guennady; Bauer, Barry J.; Kleppinger, Ralf; Forier, Bart; Dehaen, Wim; Amis, Eric J.; Mischenko, Nikolai; Reynaers, Harry  
 CORPORATE SOURCE: Laboratory of Macromolecular Structural Chemistry, Department of Chemistry, Catholic University of Leuven, Heverlee, B-3001, Belg.  
 SOURCE: Macromolecular Chemistry and Physics (2001 ), 202(6), 891-899  
 CODEN: MCHPES, ISSN: 1022-1352  
 PUBLISHER: Wiley-VCH Verlag GmbH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 16 May 2001  
 AB The size of poly(benzyl ether) dendrimers with different mol. architectures was measured by small angle neutron scattering (SANS). Both polar and non-polar solvents were used to measure the effect of solvent type. The radius of gyration ( $R_g$ ) of all of the dendrimers follows a scaling law of  $R_g \propto M^{1/3}$  consistent with literature values of other chemical different dendrimers. The effect of solvent type on dendrimer size was minimal.  
 IT 350255-14-0  
 (influence of mol. architecture and solvent type on size and

## structure of poly(benzyl ether) dendrimers by small angle neutron scattering)

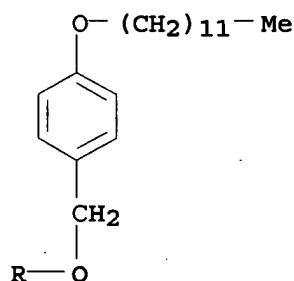
RN 350255-14-0 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[[4-(dodecyloxy)phenyl]methoxy]-2,8,14,20-tetramethyl- (CA INDEX NAME)

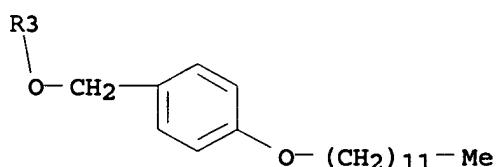
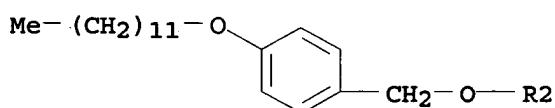
PAGE 1-A



PAGE 2-A



PAGE 3-A



CC 36-2 (Physical Properties of Synthetic High Polymers)

IT 350255-14-0 350255-15-1

(influence of mol. architecture and solvent type on size and structure of poly(benzyl ether) dendrimers by small angle neutron scattering)

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 14 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:272887 HCPLUS

DOCUMENT NUMBER: 135:61583

TITLE: Synthesis and photoinduced deprotection of calixarene derivatives containing certain protective groups

AUTHOR(S): Nishikubo, Tadatomi; Kameyama, Atsushi; Tsutsui,

CORPORATE SOURCE: Kousuke; Kishimoto, Shinichi  
 Department of Applied Chemistry, Faculty of  
 Engineering, Kanagawa University, Yokohama,  
 221-8686, Japan

SOURCE: Journal of Polymer Science, Part A: Polymer  
 Chemistry (2001), 39(9), 1481-1494  
 CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

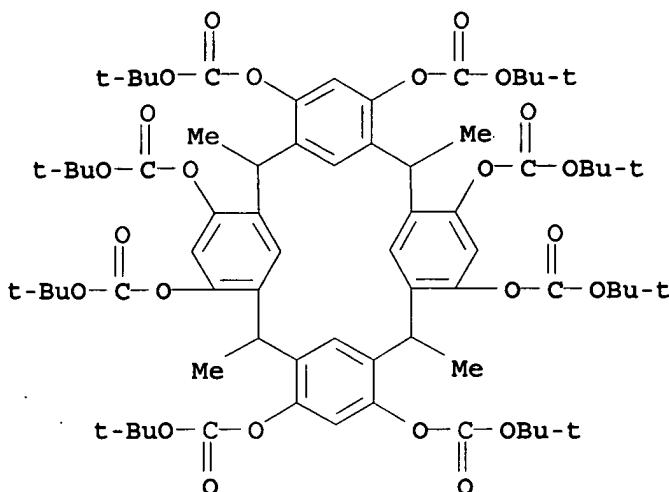
ED Entered STN: 18 Apr 2001

AB Calixarene derivs. 1, 2, and 3 containing pendant tert-butoxycarbonyl (t-BOC) groups were synthesized in 81, 93, and 83% yield, resp., by the reaction of C-methylcalix[4]resorcinarene (CRA), p-methylcalix[6]arene (MCA), and p-tert-butylcalix[8]arene (BCA) with di-tert-Bu dicarbonate using triethylamine as a base in pyridine. Calixarene derivs. containing pendant trimethylsilyl ether (TMSE) groups were obtained in 58, 50, and 82% yields, resp., by the reaction of CRA, MCA, and BCA with 1,1,1,3,3,3-hexamethyldisilazane using chlorotrimethylsilane as an accelerator in THF. Calixarene derivs. containing pendant cyclohexenyl ether (CHE) groups were also prepared in 65, 78, and 84% yields, resp., by the reaction of CRA, MCA, and BCA with 3-bromocyclohexene using KOH as base and tetrabutylammonium bromide as phase-transfer catalyst in N-methyl-2-pyrrolidone. The photoinduced deprotection of calixarene derivs. 1-3 was examined with bis-[4-(diphenylsulfonio)phenyl]sulfide bis(hexafluorophosphate) as a photoacid generator on UV irradiation followed by heating in the film state, and the deprotection of the t-BOC groups of proceeded smoothly in high conversion. The deprotection rate of the t-BOC groups of 2 and 3 was much lower than that of 1 under the same irradiation conditions. The photoinduced deprotection of calixarenes containing tetramethylsilane groups and CHE groups was also examined under similar reaction conditions; the deprotection rate of the substituted compds. was lower than that of 1-3 calixarenes.

IT 250715-31-2P  
 (synthesis and photoinduced deprotection of calixarene derivs.  
 containing t-BOC and trimethylsilyl ether cyclohexenyl ether protective  
 groups)

RN 250715-31-2 HCPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,1  
 9]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI)  
 (CA INDEX NAME)



CC 35-2 (Chemistry of Synthetic High Polymers)

IT 68971-83-5P 160399-38-2P 250715-26-5P 250715-27-6P

250715-31-2P 250715-32-3P 250715-35-6P 250715-36-7P

346406-91-5P

(synthesis and photoinduced deprotection of calixarene derivs.  
containing t-BOC and trimethylsilyl ether cyclohexenyl ether protective  
groups)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L44 ANSWER 15 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:133371 HCPLUS

DOCUMENT NUMBER: 134:318932

TITLE: New liquid crystals based on calixarenes

AUTHOR(S): Yonetake, Koichiro; Nakayama, Tomonari; Ueda, Mitsuru

CORPORATE SOURCE: Department of Materials Science and Engineering,  
Faculty of Engineering, Yamagata University,  
Yonezawa, Yamagata, 992-8510, JapanSOURCE: Journal of Materials Chemistry (2001),  
11(3), 761-767

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

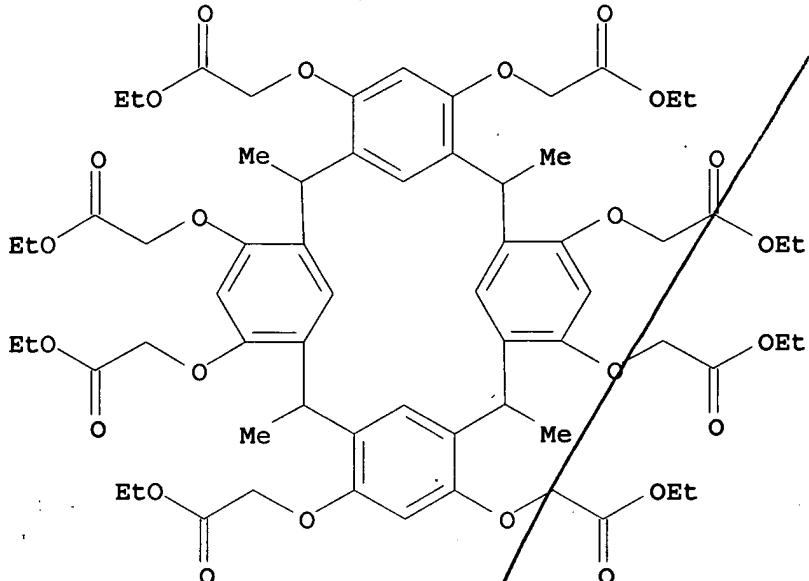
ED Entered STN: 23 Feb 2001

AB New liquid crystals based on calixarenes were prepared by the reaction of calixarene, tert-butylicalix[8]arene and C-methyloctakis(2-hydroxyethyl)calix[4]resorcinarene, and 11-[(4'-cyano-1,1'-biphenyl-4-yl)oxy]undecanoyl chloride in the presence of NET3. The structures of were characterized by IR, 1H NMR, 13C NMR, and MALDI-TOF mass spectrosopies. The prepared compds. have glass transitions at .apprx.-30 and 25°, resp. Both of them exhibited smectic liquid crystals. One compound adopts a specific mol. structure due to the rigid bowl calix[4]resorcinarene core, i.e., a cone-like structure with mesogenic units aligned within the mol. Also, the smectic A phase was transformed to nematic. The supercooling of this compound for the phase transition was very small due to the mol. structure.

IT 335118-71-3P

(preparation and hydroxylation of)

RN 335118-71-3 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''-[ (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl)octakis(oxy)]octakis-, octaethyl ester, stereoisomer (9CI) (CA INDEX NAME)



CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 25

IT 335118-71-3P

(preparation and hydroxylation of)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:734927 HCAPLUS

DOCUMENT NUMBER: 133:310639

TITLE: Cyanoacrylate adhesive composition with good surface and clearance curability

INVENTOR(S): Tajima, Seitaro; Sato, Mitsuyoshi

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

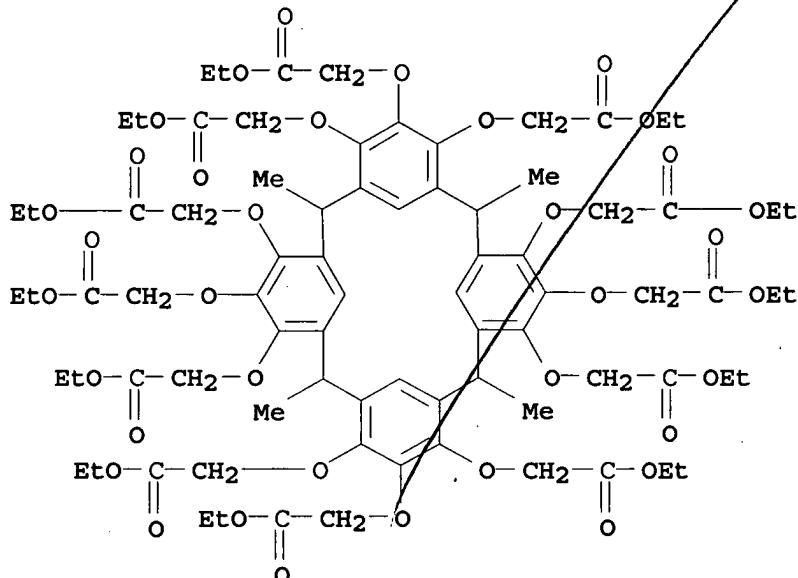
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000290600	A	20001017	JP 1999-100619 <--	19990407
PRIORITY APPLN. INFO.:			JP 1999-100619 <--	19990407

ED Entered STN: 18 Oct 2000  
 AB The composition contain (a) metal salts of metals such as Li, Na, K, etc. and (b) inclusion compds. An adhesive contained Et 2-cyanoacrylate, NaCl (0.1 ppm), nitrobenzene (200 ppm) and 18-crown-0-6 (200 ppm), showing set time 8 min.  
 IT 280569-32-6  
 (cyanoacrylate adhesive composition with good surface and clearance curability)  
 RN 280569-32-6 HCPLUS  
 CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2''''''''',2''''''''''',2''''''''''''',2''''''''''''''',2''''''''''''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,5,6,10,11,12,16,17,18,22,23,24-dodecyl)dodecakis(oxy)dodecakis-, dodecaethyl ester (9CI) (CA INDEX NAME)



IC ICM C09J004-04  
 CC 38-3 (Plastics Fabrication and Uses)  
 IT 2923-17-3, Lithium trifluoroacetate 2966-50-9, Silver trifluoroacetate 7447-41-8, Lithium chloride, uses 7647-14-5, Sodium chloride, uses 7647-15-6, Sodium bromide, uses 7681-11-0, Potassium iodide, uses 7727-43-7, Barium sulfate 7789-39-1, Rubidium bromide 10476-81-0, Strontium bromide 14104-20-2, Silver borofluoride 17455-13-9, 18-Crown-6-ether 21907-50-6, Cesium trifluoroacetate 25322-68-3, PEG1000 33454-82-9, Lithium trifluoromethanesulfonate 97600-39-0, 4-tert-Butylcalix[4]arene-O,O',O'',O'''-tetraacetic acid tetraethyl ester 280569-32-6  
 (cyanoacrylate adhesive composition with good surface and clearance curability)

L44 ANSWER 17 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:733217 HCPLUS

DOCUMENT NUMBER: 133:310624

TITLE: Cyanoacrylate adhesive composition with good surface and clearance curability

INVENTOR(S): Tajima, Seitaro; Sato, Mitsuyoshi

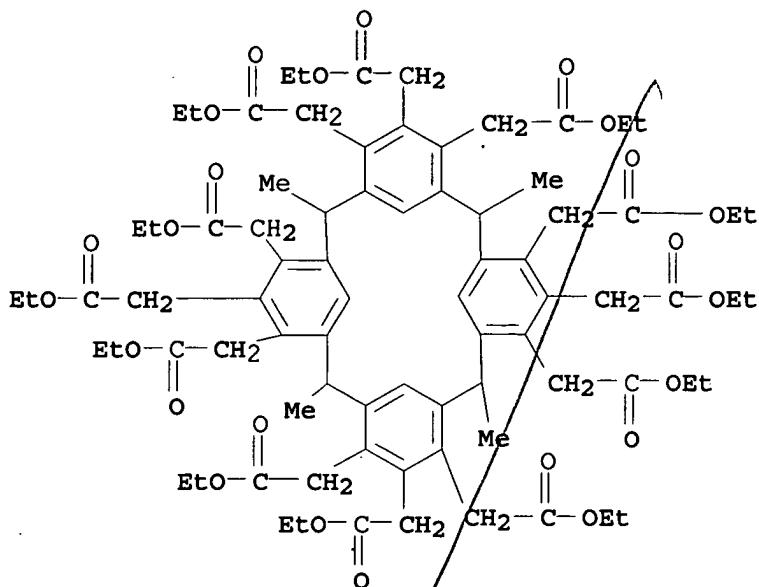
PATENT ASSIGNEE(S) : Toa Gosei Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000290601	A	20001017	JP 1999-100616 <--	19990407
JP 3613321	B2	20050126		
DE 10017246	A1	20001109	DE 2000-10017246 <--	20000406
FR 2791985	A1	20001013	FR 2000-4459 <--	20000407
FR 2791985	B1	20041217		
US 6547985	B1	20030415	US 2000-545609 <--	20000407
US 2003135016	A1	20030717	US 2003-375364 <--	20030228
US 6830704	B2	20041214		
PRIORITY APPLN. INFO.:			JP 1999-100616 <-- US 2000-545609 <--	A 19990407 A1 20000407

ED Entered STN: 17 Oct 2000  
 AB The composition contain (a) Lewis acid metal salts consisting of specified metal such as Zn, Cd, etc. and conjugate bases of O-containing acids, where the metals are bonded to the conjugate based via the O atom; and (b) inclusion compds. An adhesive contained Et 2-cyanoacrylate, Al acetate (10 ppm), and 18-crown-0-6 (500 ppm), showing set time 7 min.  
 IT 301830-24-0  
 (cyanoacrylate adhesive composition with good surface and clearance curability)  
 RN 301830-24-0 HCAPLUS  
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,5,6,10,11,12,16,17,18,22,23,24-dodecaacetic acid, 2,8,14,20-tetramethyl-, dodecaethyl ester (9CI) (CA INDEX NAME)



IC ICM C09J004-04  
ICS C09J011-06

CC 38-3 (Plastics Fabrication and Uses)

IT 139-12-8, Aluminum acetate 543-90-8, Cadmium acetate 555-32-8,  
Aluminum benzoate 7360-53-4, Aluminum formate 13257-51-7  
17455-13-9, 18-Crown-ether-6 23586-53-0 25322-68-3 36554-89-9,  
Aluminum trifluoroacetate 36554-90-2 36554-91-3 91812-77-0  
97600-39-0, 4-tert-Butyl calix[4]arene-O,O',O'',O'''-tetraacetic acid  
tetraethyl ester 226949-03-7 301830-24-0  
(cyanoacrylate adhesive composition with good surface and clearance  
curability)

L44 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:653730 HCAPLUS

DOCUMENT NUMBER: 133:238532

TITLE: Calixarene derivatives and low-mold-shrinkage  
curable resin compositions containing them

INVENTOR(S): Nishikubo, Tadaomi; Kameyama, Atsushi; Ando,  
Yoshinori

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
JP 2000256362	A	20000919	JP 1999-61087	19990309 <--
PRIORITY APPLN. INFO.:			JP 1999-61087	19990309 <--

OTHER SOURCE(S): MARPAT 133:238532

ED Entered STN: 19 Sep 2000

AB The title derivs. are calixarenes bearing spiro-orthoester groups.

Thus, mixing 0.34 g calix[4]resorcinarene with 1.96 g cesium carbonate in 3 mL N-methyl-2-pyrrolidone at room temperature for 5 h, adding 0.08 g tetrabutylammonium bromide and 1.15 g Me bromoacetate, mixing at 70° for 48 h and working up gave 2,8,14,20-tetramethyl-4,6,10,12,16,18,22,24-octakis[(methoxycarbonyl)methoxy]calix[4]resorcinarene which was hydrolyzed, heated with 1,8-diazabicyclo[5.4.0]-7-undecene in N-methyl-2-pyrrolidone at 60° for 12 h and derivatized with 2-bromomethyl-1,4,6-trioxaspiro[4.4]nonane to give a title derivative

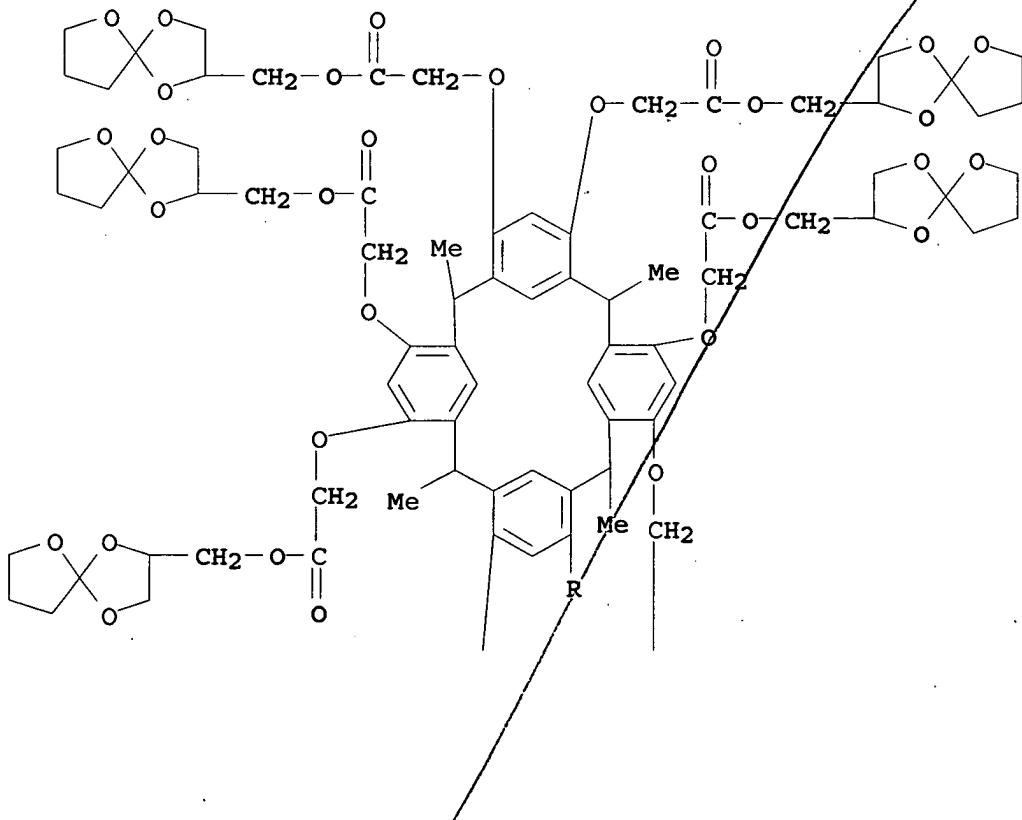
IT 294182-92-6P

(calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)

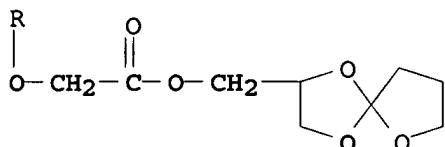
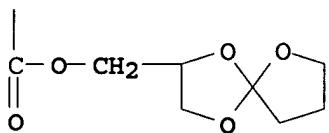
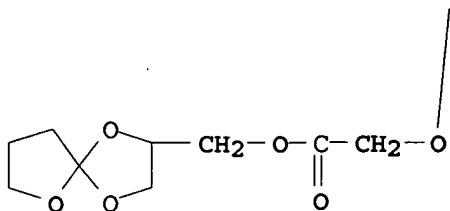
RN 294182-92-6 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-octakis(1,4,6-trioxaspiro[4.4]nonan-2-ylmethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



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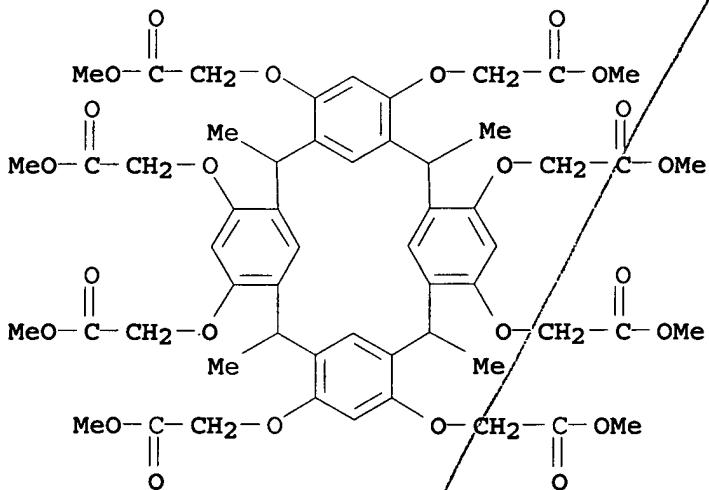


IT 203063-80-3P

(intermediate; calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)

RN 203063-80-3 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octamethyl ester (9CI) (CA INDEX NAME)



IT 294182-95-9P

(photocurable resins; calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)

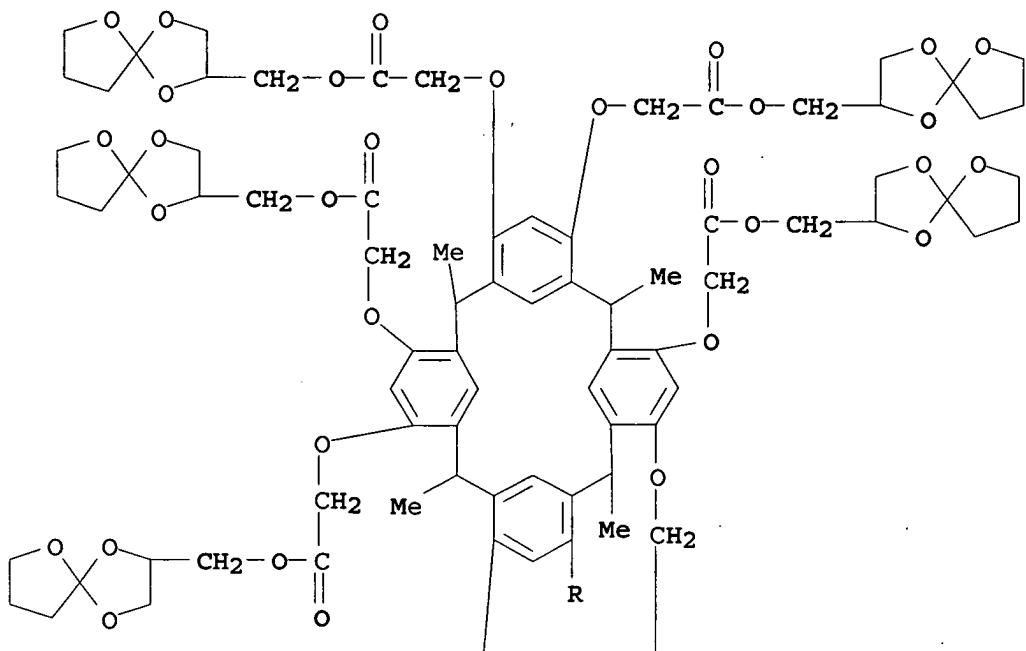
RN 294182-95-9 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octakis(1,4,6-trioxaspiro[4.4]non-2-ylmethyl) ester, homopolymer (9CI) (CA INDEX NAME)

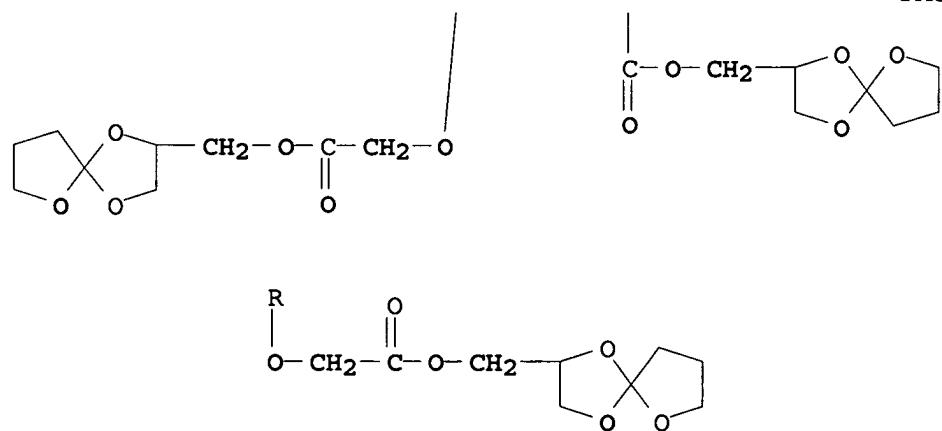
CM 1

CRN 294182-92-6  
CMF C104 H128 O48

PAGE 1-A



PAGE 2-A



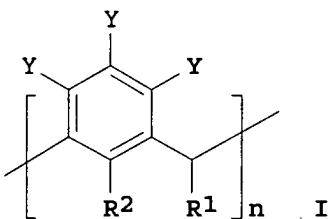
IC ICM C07D493-10  
 ICS C08G004-00; C08G008-36; C08G065-16; C08G085-00  
 CC 35-7 (Chemistry of Synthetic High Polymers)  
 IT 294182-92-6P 294182-93-7P 294182-94-8P  
 (calixarene derivs. and low-mold-shrinkage curable resin compns.  
 containing them)

IT 97600-42-5P 116851-59-3P 130508-38-2P 203063-80-3P  
 294182-90-4P 294182-91-5P  
 (intermediate; calixarene derivs. and low-mold-shrinkage curable  
 resin compns. containing them)  
 IT 294182-95-9P 294182-96-0P 294182-97-1P  
 (photocurable resins; calixarene derivs. and low-mold-shrinkage  
 curable resin compns. containing them)

L44 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:468070 HCAPLUS  
 DOCUMENT NUMBER: 133:90239  
 TITLE: Cyclic compounds useful as curing accelerators for  
 2-cyanoacrylates and 2-cyanoacrylate compositions  
 therewith  
 INVENTOR(S): Tajima, Seitaro; Sato, Sanzen  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000191600	A	20000711	JP 1998-372151	19981228
PRIORITY APPLN. INFO.:				<--
JP 1998-372151				19981228
<--				

ED Entered STN: 12 Jul 2000  
 GI

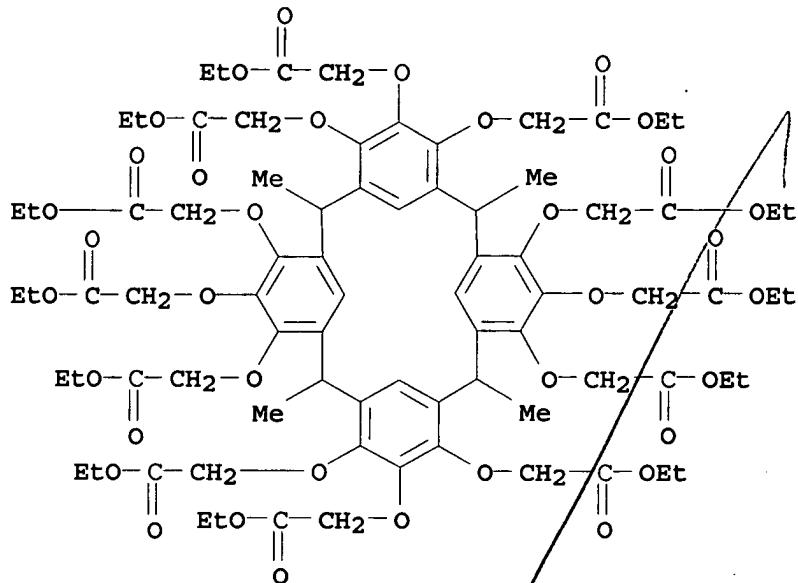


AB Title cyclic compns. are represented by the general formula I, where Y = H, OH, or OR (R does not initiate polymerization of 2-cyanoacrylates); at least one of Y = OR; at least one of remained Y = OH or OR; n = integer of  $\geq 4$ ; R1 = H or Me; and R2 = H or substituted group which does not initiate polymerization of 2-cyanoacrylates. Thus, an adhesive composition comprising Et 2-cyanoacrylate and 1% I (all Y =  $\text{OCH}_2\text{COOCH}_2\text{CH}_3$ , n = 4, R1 = Me, R2 = H) prepared from pyrogallol, 1,1-diethoxyethane, and Et bromoacetate was applied on methacrylic resin, chloroprene rubber, flexible PVC, SUS, or beech and cured at 25° for 18 h showing good instantaneous adhesion and giving a cured product without whitening.

IT 280569-32-6P 280569-33-7P  
 (preparation of cyclic compds. useful as curing accelerators for  
 2-cyanoacrylate polymer adhesives)

RN 280569-32-6 HCAPLUS

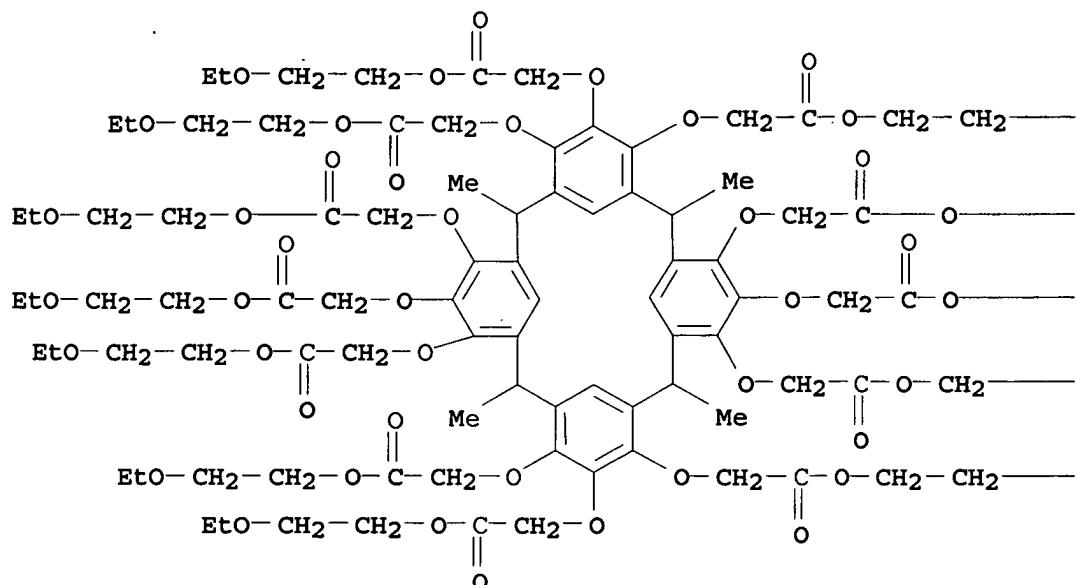
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2''''''''',2''''''''''',2''''''''''''-[ (2,8,14,20-  
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,5,6,10,11,12,16,17,18,22,23,24-dodecanyl)dodecakis(oxy)dodecakis-,  
dodecaethyl ester (9CI) (CA INDEX NAME)



RN 280569-33-7 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2''''''''',2''''''''''',2''''''''''''-[ (2,8,14,20-  
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,5,6,10,11,12,16,17,18,22,23,24-dodecanyl)dodecakis(oxy)dodecakis-,  
dodecakis(2-ethoxyethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—OEt

—CH<sub>2</sub>—CH<sub>2</sub>—OEt—CH<sub>2</sub>—CH<sub>2</sub>—OEt—CH<sub>2</sub>—OEt

—OEt

IC ICM C07C069-734  
 ICS C07C069-738; C08F004-00; C08F022-32; C09J004-04; C09J011-06;  
 C09J135-04

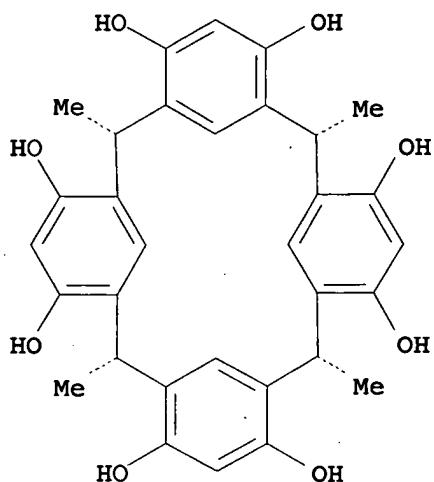
CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 25, 38, 39, 67

IT 280569-32-6P 280569-33-7P 280569-34-8P  
 (preparation of cyclic compds. useful as curing accelerators for  
 2-cyanoacrylate polymer adhesives)

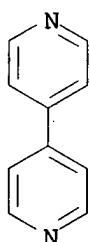
L44 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:354733 HCAPLUS

DOCUMENT NUMBER: 133:222285  
 TITLE: Multi-guest inclusion within one-dimensional hydrogen bonded polymers based on C-methylcalix[4]resorcinarene  
 AUTHOR(S): MacGillivray, Leonard R.; Holman, K. Travis; Atwood, Jerry L.  
 CORPORATE SOURCE: Department of Chemistry, University of Columbia-Missouri, Columbia, MO, 65211, USA  
 SOURCE: ACA Transactions (1999), Volume Date 1998, 33(Crystal Engineering), 129-133  
 CODEN: ATCRCS  
 PUBLISHER: American Crystallographic Association  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 28 May 2000  
 AB X-ray crystal structures (crystal data given) of co-crystals involving C-methylcalix[4]resorcinarene (I) and 4,4'-bipyridine crystallized from THF and THF/MeCN (8:1) are reported. In both cases, a one-dimensional (1D) wave-like H-bonded polymer, I.2(4,4'-bipyridine) (II), was formed in which 2 guests, II.2(THF) and II.THF.MeCN, which assemble as van der Waals type complexes, are located within an extended cavity of I. In the case of II.THF.MeCN, the mol. of MeCN interacts with I by way of C-H...π interactions. Such observations provide insight into those interactions which may occur in multi-guest host-guest systems.  
 IT 292046-41-4P 292046-43-6P  
 (crystallog. study of van der Waals complexes of THF and MeCN included in one-dimensional hydrogen bonded polymer of C-methylcalix[4]resorcinarene with 4,4'-bipyridine)  
 RN 292046-41-4 HCAPLUS  
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer, compd. with 4,4'-bipyridine and tetrahydrofuran (1:2:2) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 74708-10-4  
 CMF C32 H32 O8

Relative stereochemistry.



CM 2

CRN 553-26-4  
CMF C10 H8 N2

CM 3

CRN 109-99-9  
CMF C4 H8 O

RN 292046-43-6 HCPLUS

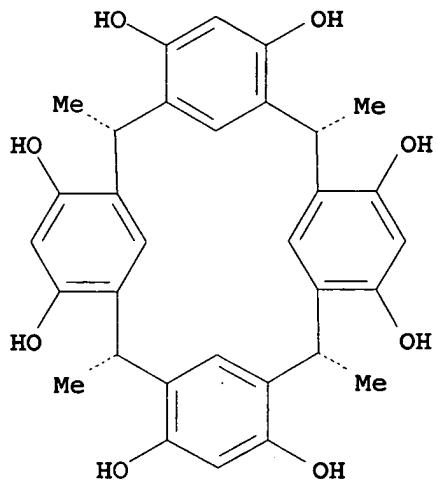
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer, compd. with acetonitrile, 4,4'-bipyridine and tetrahydrofuran (1:1:2:1) (9CI) (CA INDEX NAME)

CM 1

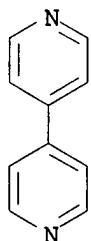
CRN 74708-10-4

CMF C32 H32 O8

Relative stereochemistry.



CM 2

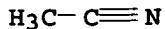
CRN 553-26-4  
CMF C10 H8 N2

CM 3

CRN 109-99-9  
CMF C4 H8 O

CM 4

CRN 75-05-8  
CMF C2 H3 N



CC 22-12 (Physical Organic Chemistry)  
 Section cross-reference(s): 75

IT 292046-41-4P 292046-43-6P

(crystallog. study of van der Waals complexes of THF and MeCN included in one-dimensional hydrogen bonded polymer of C-methylcalix[4]resorcinarene with 4,4'-bipyridine)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 21 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:48373 HCPLUS

DOCUMENT NUMBER: 132:214979

TITLE: Solvent provides a trap for the guest-induced formation of 1D host frameworks based upon supramolecular, deep-cavity resorcin[4]arenes

MacGillivray, Leonard R.; Reid, Jennifer L.; Ripmeester, John A.

CORPORATE SOURCE: Steacie Institute for Molecular Sciences, National Research Council of Canada, Ottawa, ON, K1A 0R6, Can.

SOURCE: CrystEngComm (1999) No pp. Given, Article 1

CODEN: CRECF4; ISSN: 1466-8033

URL: <http://www.rsc.org/ej/ce/1999/A907110E/index.htm>

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

ED Entered STN: 21 Jan 2000

AB Co-crystallization of C-methylcalix[4]resorcinarene 1 with 4,4'-bipyridine 2 from EtOH in the presence of either an aromatic or a polycyclic guest yields a wave-like host guest framework 3·guest {where 3 = 1·2(2), guest = p-chlorotoluene, adamantanone, [2.2]paracyclophe} in which 3 forms by way of guest template effects.

IT 260388-88-3

(crystallization and crystal structure of)

RN 260388-88-3 HCPLUS

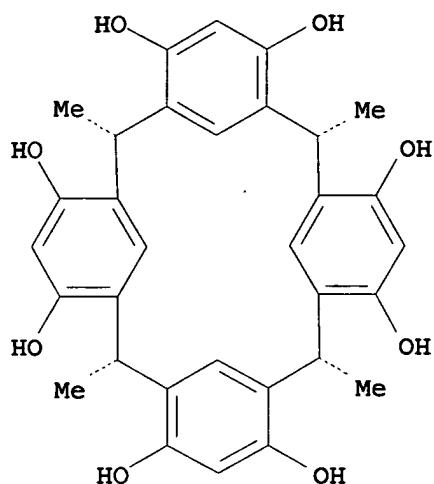
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer, compd. with 4,4'-bipyridine and tricyclo[3.3.1.13,7]decanone (1:2:1) (9CI) (CA INDEX NAME)

CM 1

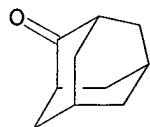
CRN 74708-10-4

CMF C32 H32 O8

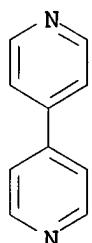
Relative stereochemistry.



CM 2

CRN 700-58-3  
CMF C10 H14 O

CM 3

CRN 553-26-4  
CMF C10 H8 N2

CC 75-8 (Crystallography and Liquid Crystals)

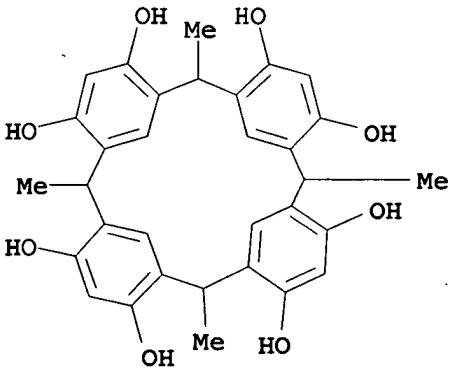
Section cross-reference(s): 25, 28

IT 260388-87-2 260388-88-3 260388-89-4  
(crystallization and crystal structure of)REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

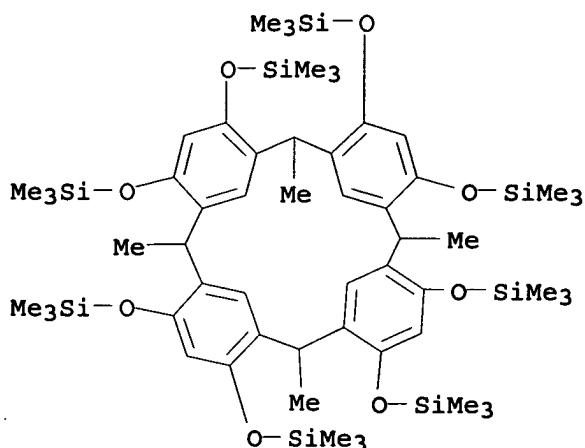
L44 ANSWER 22 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1999:744383 HCPLUS  
 DOCUMENT NUMBER: 132:7560  
 TITLE: Acid-decomposable group-containing calixarenes,  
 calixresorcinarenes, and photosensitive  
 composition for resist  
 INVENTOR(S): Nishikubo, Tadaomi; Kameyama, Atsushi; Ota,  
 Yoshihisa  
 PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11322656	A	19991124	JP 1998-146597 ---	19980511
PRIORITY APPLN. INFO.:			JP 1998-146597 ---	19980511

OTHER SOURCE(S): MARPAT 132:7560  
 ED Entered STN: 24 Nov 1999  
 GI For diagram(s), see printed CA Issue.  
 AB The composition contains  $\geq 1$  calix(resorcin)arenes I (R<sub>1</sub>, R<sub>2</sub> = H, C<sub>1-5</sub> alkyl; R<sub>3</sub> = H, O<sub>2</sub>CBu-t, SiMe<sub>3</sub>, cyclohexenyl; n = 1-3; m = 4-12) and a photo-acid generator. The composition is useful as pos.-working chemical amplified resists.  
 IT 65338-98-9P, Calix[4]resorcinarene 160399-38-2P  
 250715-31-2P  
 (acid-decomposable group-containing calixarenes or calixresorcinarenes for photoresists)  
 RN 65338-98-9 HCPLUS  
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)

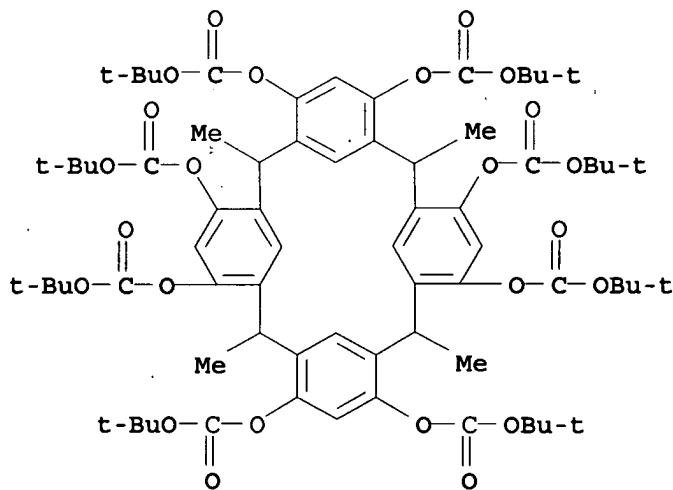


RN 160399-38-2 HCPLUS  
 CN Silane, [(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl)octakis(oxy)]octakis(trimethyl- (9CI) (CA INDEX NAME)



RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI)  
(CA INDEX NAME)



IC ICM C07C043-235

ICS C07C069-33; C07F007-18; G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

ST calixarene calixresorcinarene photosensitive compn resist;  
acid decomposable calixarene calixresorcinarene photoresistIT Positive photoresists  
(acid-decomposable group-containing calixarenes or calixresorcinarenes for photoresists)IT Metacyclophanes  
(calixarenes; acid-decomposable group-containing calixarenes or calixresorcinarenes for photoresists)IT 108-46-3, 1,3-Benzenediol, reactions 123-63-7 1521-51-3,  
3-Bromocyclohexene 68971-82-4, p-tert-Butylcalix(8)arene

250715-27-6 250715-28-7, p-Methylcalix(7)arene 250715-30-1,  
 p-Methylcalix(8)arene  
 (acid-decomposable group-containing calixarenes or calixresorcinarenes  
 for photoresists)

IT 65338-98-9P, Calix[4]resorcinarene 68971-83-5P  
 160399-38-2P 250715-26-5P 250715-31-2P  
 250715-32-3P 250715-33-4P 250715-34-5P 250715-35-6P  
 250715-36-7P 250715-37-8P 250715-39-0P 250715-40-3P  
 (acid-decomposable group-containing calixarenes or calixresorcinarenes  
 for photoresists)

L44 ANSWER 23 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:513131 HCPLUS

DOCUMENT NUMBER: 131:293195

TITLE: Novel dissolution inhibitors based on calixarene  
 derivatives for use in chemical amplification  
 resists

AUTHOR(S): Ito, Hiroshi; Nakayama, Tomonari; Ueda, Mitsuru;  
 Sherwood, Mark; Miller, Dolores

CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA, 95120,  
 USA

SOURCE: Polymeric Materials Science and Engineering (1999), 81, 51-52

CODEN: PMSEDG; ISSN: 0743-0515

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 18 Aug 1999

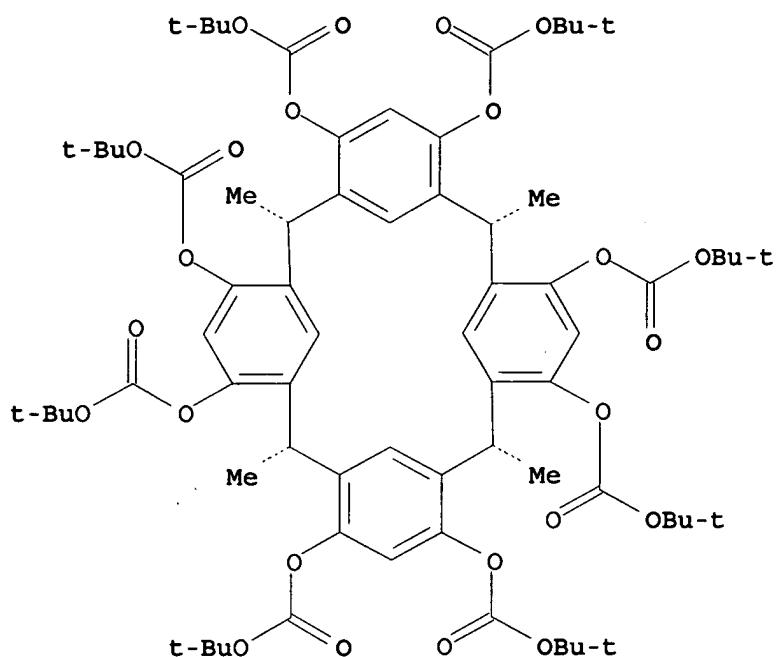
AB Calix[4]resorcinarenes were synthesized by condensing resorcinol with  
 aldehydes (acetaldehyde, benzaldehyde, and 4-isopropylbenzaldehyde)  
 and separated into C4v and C2v, isomers. All eight OH groups were  
 protected with acid-labile groups such as tBOC and tBuOCOCH2. The  
 protected calixarenes have been found to be excellent dissoln.  
 inhibitors for use in chemical amplification resists.

IT 246023-01-8P 246023-03-0P  
 (novel dissoln. inhibitors based on calix[4]resorcinarenes for use  
 in chemical amplification resists)

RN 246023-01-8 HCPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,1  
 9]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octetyl octakis(1,1-dimethylethyl) ester,  
 stereoisomer (9CI) (CA INDEX NAME)

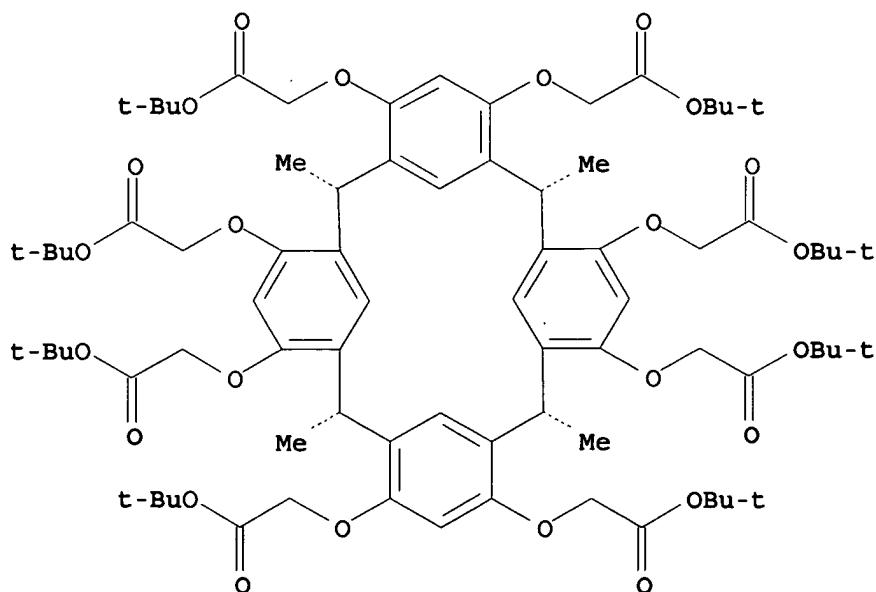
Relative stereochemistry.



RN 246023-03-0 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octetyl)octakis(oxy)]octakis-(octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76  
 IT 74410-61-0DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected  
 145843-14-7DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected  
 246023-01-8P 246023-03-0P 246023-04-1DP,  
 t-butoxycarbonyl- or t-butoxycabonylmethyl-protected 246023-06-3P  
 246024-56-6DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected  
 (novel dissoln. inhibitors based on calix[4]resorcinarenes for use  
 in chemical amplification resists)  
 REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L44 ANSWER 24 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1999:44198 HCPLUS  
 DOCUMENT NUMBER: 130:202814  
 TITLE: A New **Photoresist** Based on  
 Calix[4]resorcinarene Dendrimer  
 AUTHOR(S): Haba, Osamu; Haga, Kohji; Ueda, Mitsuru; Morikawa,  
 Osamu; Konishi, Hisatoshi  
 CORPORATE SOURCE: Department of Human Sensing and Functional Sensor  
 Engineering Graduate School of Engineering,  
 Yamagata University, Yamagata, 992-8510, Japan  
 SOURCE: Chemistry of Materials (1999), 11(2),  
 427-432  
 CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

ED Entered STN: 22 Jan 1999

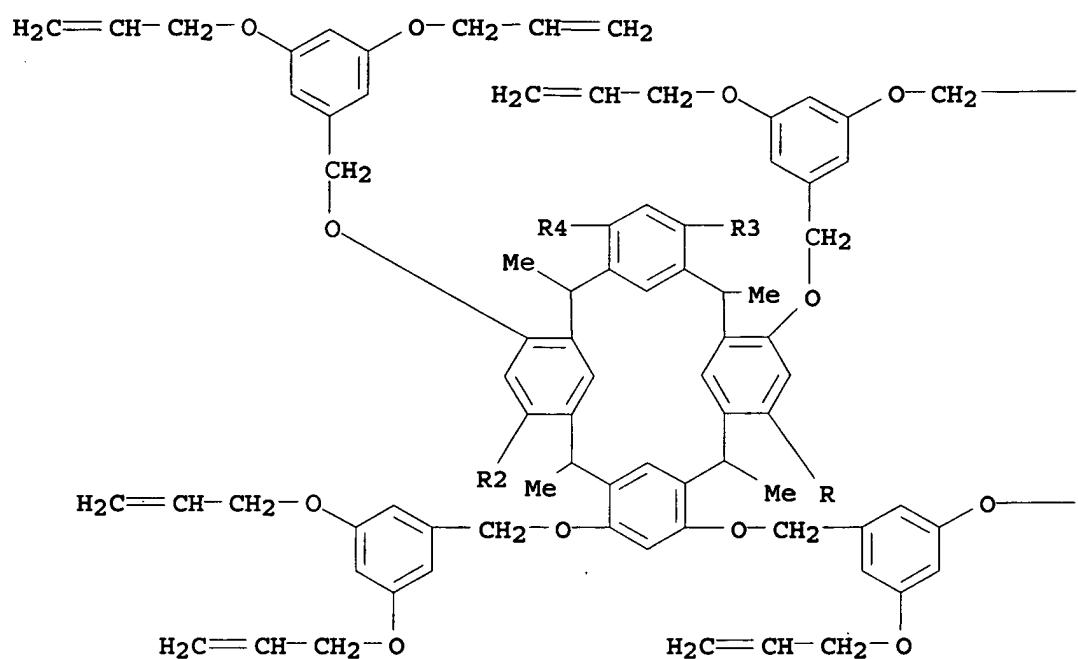
AB A new dendrimer (1), which contains phenol groups in the exterior for solubilization in aqueous alkaline solution and calix[4]resorcinarene in the interior to increase the mol. weight and number of the phenol group even in the lower generation, was designed as new neg.-working, alkaline-developable **photoresist** material. A neg.-working **photoresist** based on 1, 2,6-bis(hydroxymethyl)phenol as crosslinker, and diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate as a photoacid generator was developed. This **resist** gave a clear neg. pattern through postbaking at 110° after exposure to UV light, followed by developing with a 0.3% aqueous Me4NOH solution at room temperature

IT 196298-31-4P  
 (in synthesis of calix[4]resorcinarene dendrimer)

RN 196298-31-4 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,  
 4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyl)phenyl]methoxy]-  
 2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

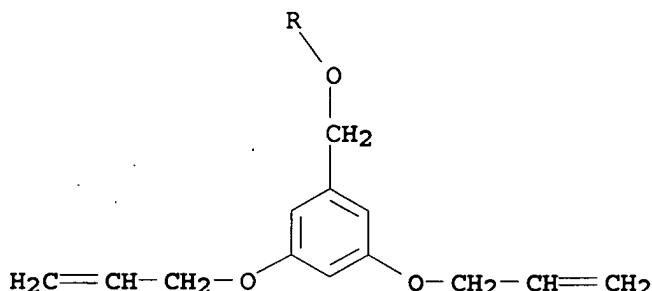
PAGE 1-A



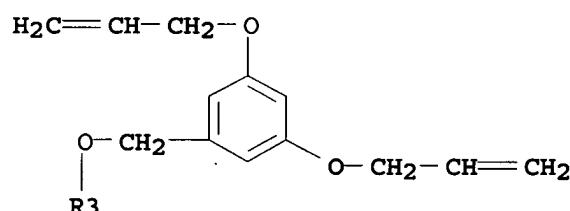
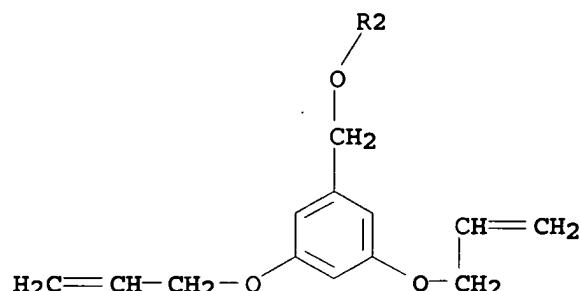
PAGE 1-B

—CH=CH<sub>2</sub>—CH<sub>2</sub>-CH=CH<sub>2</sub>

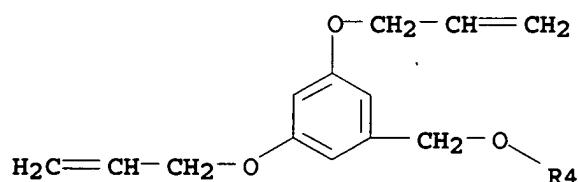
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IT 196298-30-3P

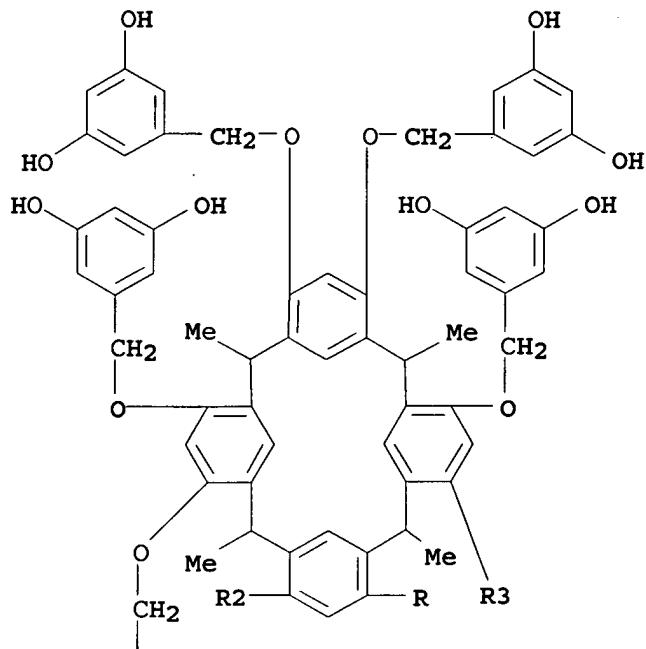
(lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)

RN 196298-30-3 HCAPLUS

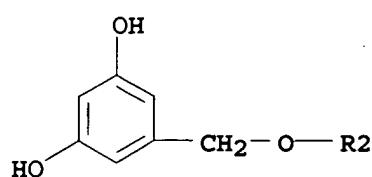
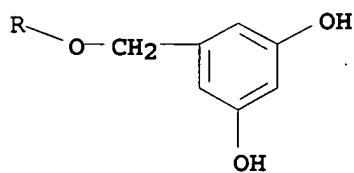
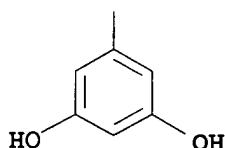
CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''''- [(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-

4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)octakis- (9CI) (CA  
INDEX NAME)

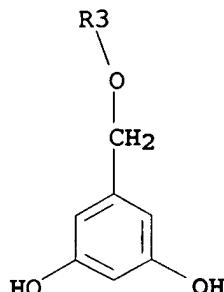
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CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST lithog photoresist calixresorcinarene dendrimer  
 IT Negative photoresists  
     (lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)  
 IT Dendritic polymers  
     (lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)  
 IT 2937-59-9, 2,6-Bis(hydroxymethyl)phenol  
     (crosslinker; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)  
 IT 75-59-2, Tetramethylammonium hydroxide  
     (developer; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)  
 IT 135710-38-2P, Methyl 3,5-di(allyloxy)benzoate 177837-80-8P,  
     3,5-Di(allyloxy)benzyl alcohol 196298-31-4P  
     (in synthesis of calix[4]resorcinarene dendrimer)  
 IT 196298-30-3P  
     (lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)  
 IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate  
     (photoacid generator; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 25 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1998:781642 HCPLUS  
 DOCUMENT NUMBER: 130:146122  
 TITLE: A New Three-Component Photoresist Based  
       on Calix[4]resorcinarene Derivative, a  
       Crosslinker, and a Photoacid Generator  
       Nakayama, Tomonari; Nomura, Masayoshi; Haga,  
       Kohji; Ueda, Mitsuru  
 AUTHOR(S):  
 CORPORATE SOURCE: Dep. Human Sensing and Functional Sensor Eng.,  
                   Graduate School of Eng., Yamagata University,  
                   Yonezawa, Yamagata, 992-8510, Japan  
 SOURCE: Bulletin of the Chemical Society of Japan (1998), 71(12), 2979-2984  
 PUBLISHER: CODEN: BCSJA8; ISSN: 0009-2673  
 DOCUMENT TYPE: Chemical Society of Japan  
                   Journal

LANGUAGE: English

ED Entered STN: 14 Dec 1998

AB Calix[4]resorcinarene [2,8,14,20-tetramethylcalix[4]arene-4,6,10,12,16,18,22,24-octol; C4-RA] (4) having p-hydroxybenzyl groups on its exterior was prepared by the condensation of C4-RA and p-(allyloxy)benzyl bromide, followed by the cleavage of allyl groups with palladium catalyst and ammonium formate. Compound 4 having high transparency to UV-light above 300 nm was considered for a new resist matrix. A three-component photoresist consisting of 4, 2,6-bis(hydroxymethyl)-4-methylphenol (BHMP), and diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate (DIAS) showed a sensitivity of 19 mJ cm<sup>-2</sup>(D1/2) and a contrast of 3.0 ( $\gamma$ 1/2) when it was exposed to 365 nm light and post-exposure baked (PEB) at 110 °C for 5 min, followed by developing with a 0.2 wt% aqueous tetramethylammonium hydroxide (TMAH) solution. A fine neg. image featuring 1  $\mu$ m of min. line and space patterns was observed on film of the photoresist exposed to 40 mJ-cm<sup>-2</sup> of UV-light at 365 nm with a scanning electron microscope.

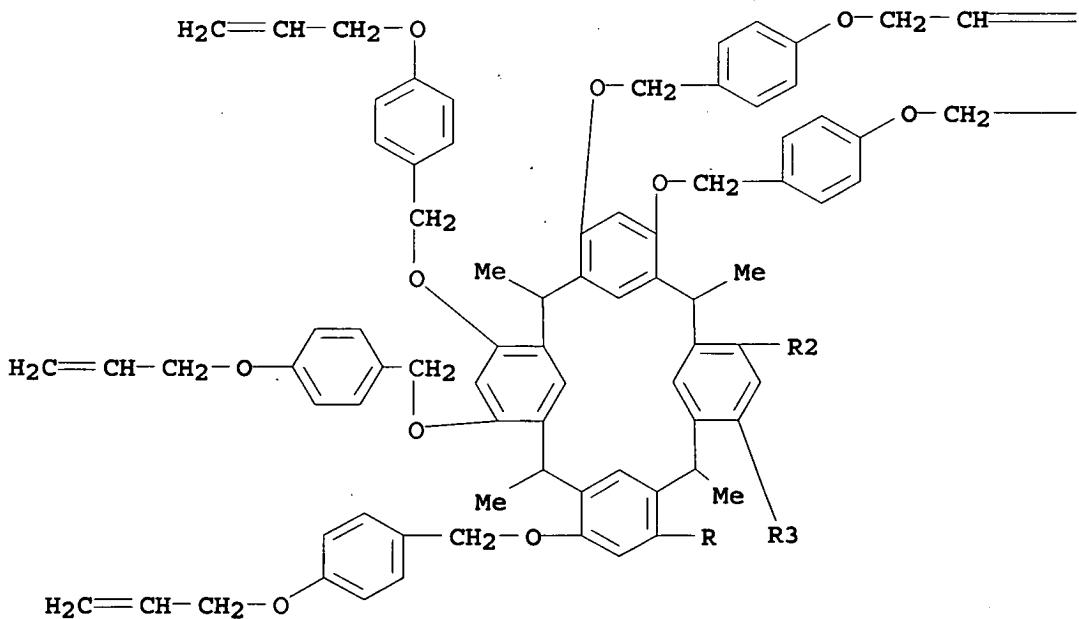
IT 220033-50-1P

(in synthesis of calix[4]resorcinarene derivative for photoresist formulation)

RN 220033-50-1 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 2,8,14,20-tetramethyl-4,6,10,12,16,18,22,24-octakis[[4-(2-propenoxy)phenyl]methoxy] - (9CI) (CA INDEX NAME)

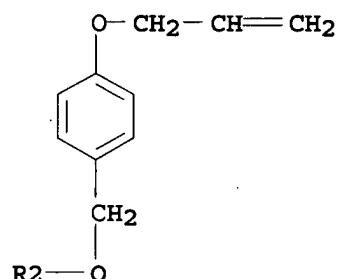
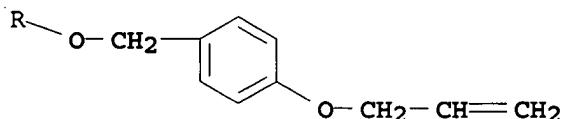
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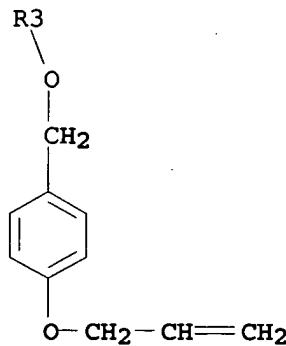
PAGE 1-B

 $\equiv \text{CH}_2$  $-\text{CH}=\text{CH}_2$ 

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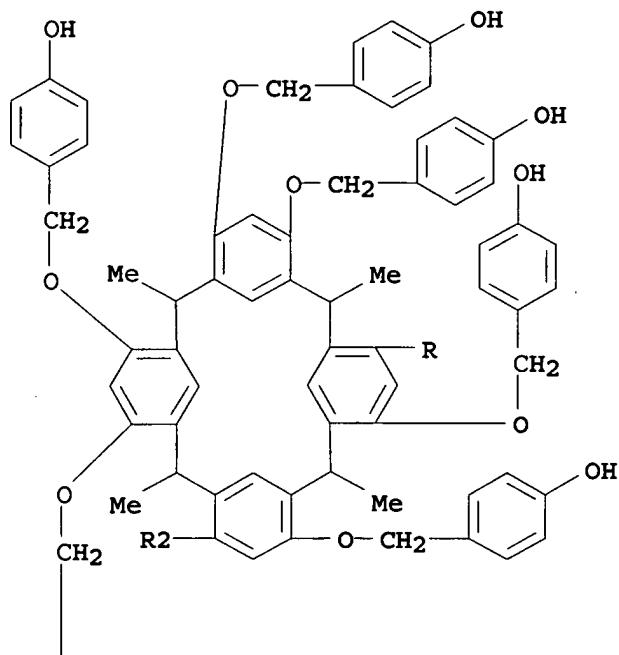
IT 220033-49-8P

(lithog. characteristics of three-component photoresist  
consisting of calix[4]resorcinarene derivative matrix and crosslinker  
and photoacid generator)

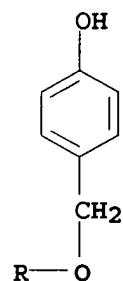
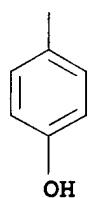
RN 220033-49-8 HCPLUS

CN Phenol, 4,4',4'',4''',4'''',4''''',4''''''',4'''''''-[(2,8,14,20-  
tetramethylpentacyclo[19.3.1.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)octakis- (9CI) (CA  
INDEX NAME)

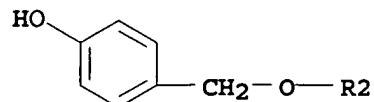
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CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST photoresist calixresorcinarene deriv crosslinker photoacid generator; lithog photoresist calixresorcinarene deriv  
 IT UV and visible spectra  
     (absorption; of calix[4]resorcinarene derivative for photoresist formulation)  
 IT Photoresists  
     (lithog. characteristics of three-component photoresist consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)  
 IT Thermal properties  
     (of calix[4]resorcinarene derivative for photoresist formulation)  
 IT 75-59-2, Tetramethylammonium hydroxide  
     (developer; lithog. characteristics of three-component photoresist consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)  
 IT 17455-13-9, 18-Crown-6  
     (in synthesis of calix[4]resorcinarene derivative for photoresist formulation)  
 IT 3256-45-9P, p-(Allyloxy)benzyl alcohol 143116-30-7P, p-(Allyloxy)benzyl bromide 220033-50-1P  
     (in synthesis of calix[4]resorcinarene derivative for photoresist formulation)  
 IT 220033-49-8P  
     (lithog. characteristics of three-component photoresist consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)  
 IT 91-04-3, 2,6-Bis(hydroxymethyl)-4-methylphenol 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate  
     (lithog. characteristics of three-component photoresist consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)  
 IT 74708-10-4  
     (reaction with allyloxybenzyl bromide and 18-crown-6 in synthesis of calix[4]resorcinarene derivative for photoresist formulation)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

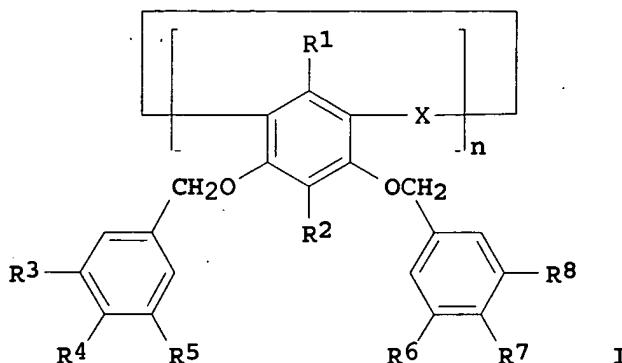
L44 ANSWER 26 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1998:758628 HCPLUS  
 DOCUMENT NUMBER: 130:73852  
 TITLE: Phenolic dendrimer and radiation-sensitive composition containing it for resist  
 INVENTOR(S): Ueda, Mitsuru  
 PATENT ASSIGNEE(S): JSR Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10310545	A	19981124	JP 1997-136066	19970509

PRIORITY APPLN. INFO.:

JP 1997-136066

19970509

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<--OTHER SOURCE(S) : MARPAT 130:73852  
ED Entered STN: 03 Dec 1998  
GI

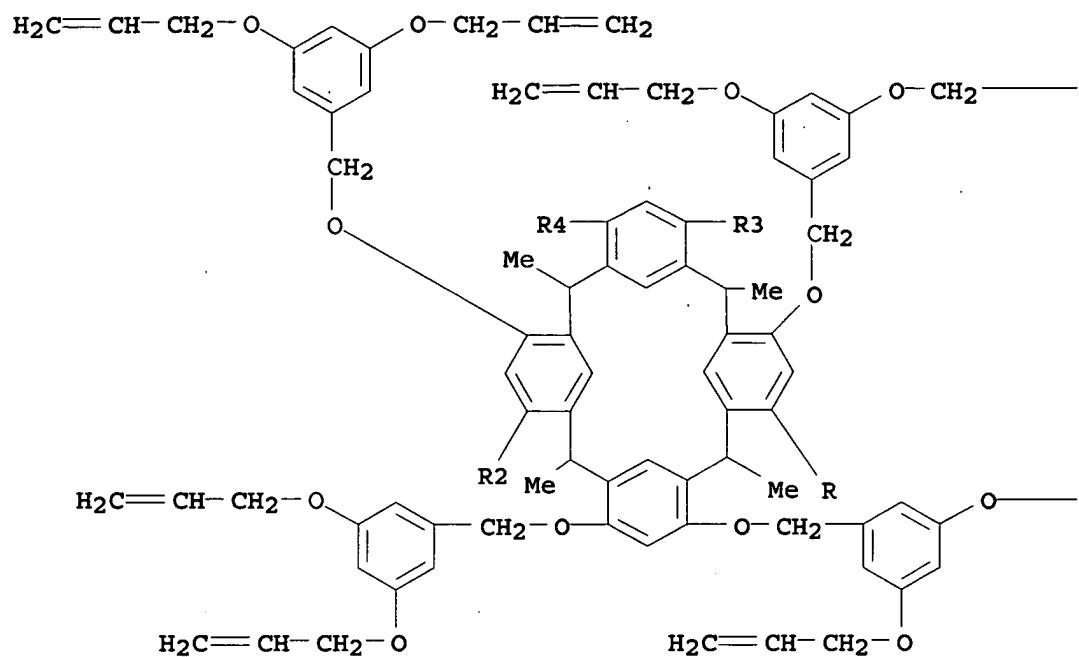
AB Title composition contains phenolic dendrimer I (R1-R8 = H, OH, halo, alkyl, aryl, aralkyl, alkoxy, alkenyl, alkenyloxy, acyl, alkoxy carbonyl, alkyloxyloxy, aryloxyloxy, cyano, NO<sub>2</sub>; ≥1 of R3-R8 = OH; X = single bond, CR<sub>9</sub>R<sub>10</sub>; R<sub>9</sub>, R<sub>10</sub> = H, alkyl, aryl; n = 3-8). The composition is useful as resist showing high sensitivity and resolution

IT 196298-31-4P  
(in preparation of phenolic dendrimer for radiation-sensitive resist composition)

RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenylloxy)phenyl]methoxy]-2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

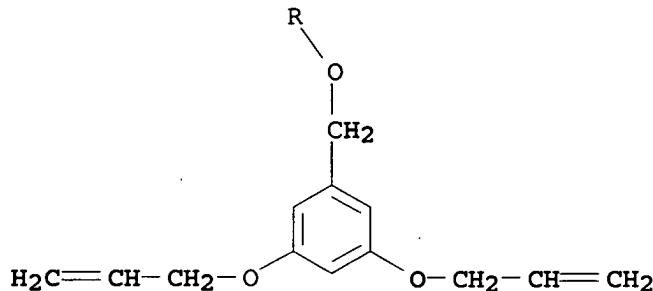
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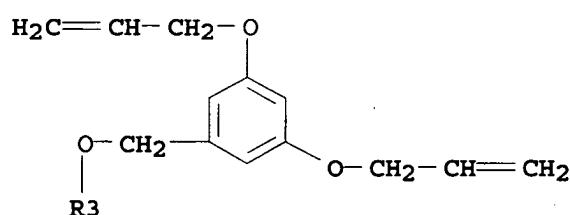
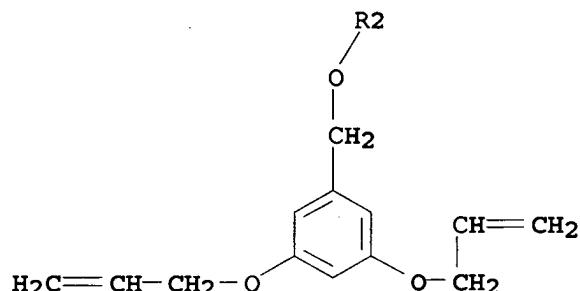
PAGE 1-B

— CH=CH<sub>2</sub>— CH<sub>2</sub>—CH=CH<sub>2</sub>

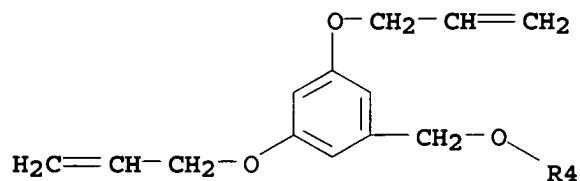
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IC ICM C07C043-23  
 ICS G03F007-022; G03F007-038; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25  
 IT 2150-44-9P, Methyl 3,5-dihydroxybenzoate 65338-98-9P 135710-38-2P,  
 Methyl 3,5-bis(allyloxy)benzoate 177837-80-8P 182058-69-1P

196298-31-4P

(in preparation of phenolic dendrimer for radiation-sensitive resist composition)

L44 ANSWER 27 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:733419 HCPLUS

DOCUMENT NUMBER: 130:95356

TITLE: Chiral calixarenes derived from resorcinol. Part 3. Functionalization of octaester derivatives with chiral amines and amino alcohols

AUTHOR(S): Iwanek, Waldemar

CORPORATE SOURCE: Institute of Chemistry, Pedagogical University, Kielce, 25-020, Pol.

SOURCE: Tetrahedron: Asymmetry (1998), 9(18), 3171-3174

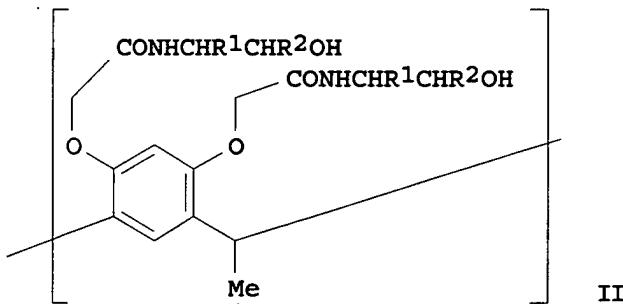
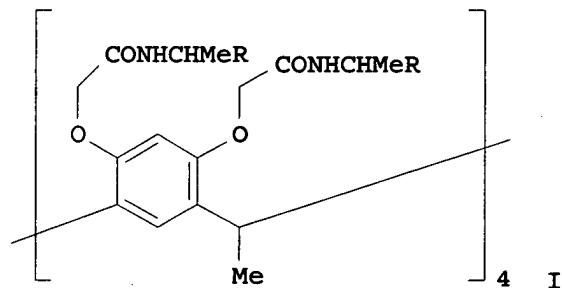
CODEN: TASYE3; ISSN: 0957-4166  
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 19 Nov 1998

GI



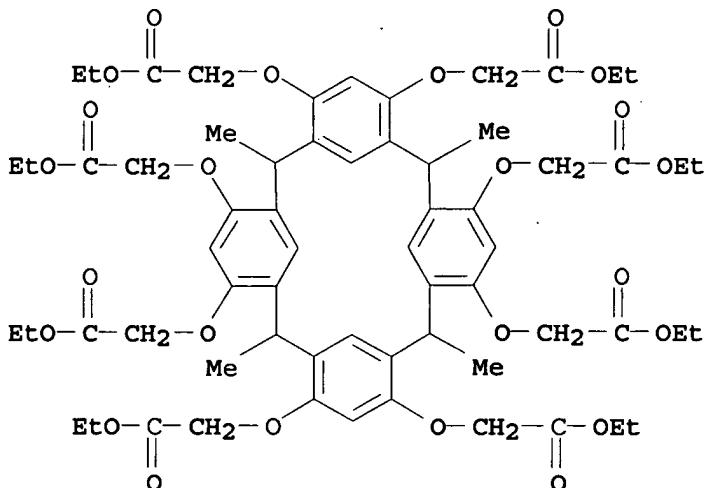
AB A new type of chiral calixresorcarene is described. The formation of both enantiomers of I (R = Ph, cyclohexyl) and II (R1 = Et, R2 = H; R1 = Me, R2 = Ph) is controlled by the chiral amines and amino alcohols used for the reaction. Formation of the dimers of these compds. in the gas phase and in solution was observed using the LSIMS and ESI-MS methods. Formation of amide dimers of I (R = Ph) in chloroform was confirmed by fluorescence spectroscopy.

IT 171799-35-2P  
(functionalization of calixresorcarene octaester with chiral amines

and amino alcs.)

RN 171799-35-2 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-,1,1',1'',1''',1'''',1''''',1''''''',1'''''''-octaethyl ester (CA INDEX NAME)



CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds).  
Section cross-reference(s): 22

IT 171799-35-2P

(functionalization of calixresorcarene octaester with chiral amines and amino alcs.)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 28 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:592926 HCPLUS

DOCUMENT NUMBER: 129:283338

TITLE: Calixarene and dendrimer as novel photoresist materials

AUTHOR(S): Haba, Osamu; Takahashi, Daisuke; Haga, Kohji; Sakai, Yoshimasa; Nakayama, Tomonari; Ueda, Mitsuru

CORPORATE SOURCE: Department of Human Sensing and Functional Sensor Engineering, Graduate School of Engineering, Yamagata University, Yamagata, 992, Japan

SOURCE: ACS Symposium Series (1998), 706(Micro- and Nanopatterning Polymers), 237-248

CODEN: ACSMC8; ISSN: 0097-6156

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 18 Sep 1998

AB Neg.-working alkaline developable photoresists based on calix[4]-resorcinarene (1) or calixarene dendrimer (2), a crosslinker, and a photoacid generator have been developed. Compound 2 was prepared by the condensation of compound 1 with 3,5-diallyloxybenzylbromide,

followed by the removal of allyl groups. The resist consisting of 1 (70 wt%), a photoacid generator, diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate (DIAS) (10 wt%), and 4,4-methylenebis[2,6-bis(hydroxymethyl)-phenol] (MBHP) (20 wt%) as a crosslinker showed a sensitivity of 2.2 mJ-cm<sup>-2</sup> and a contrast of 3.1 when it was exposed to 365 nm light and postbaked at 130°C for 3 min, followed by developing with a 0.1% aqueous tetramethylammonium hydroxide (TMAH) solution. On the other hand, the resist formulated by mixing 2 (70 wt%), DIAS (10 wt%), and the crosslinker, 2,6-bis(hydroxymethyl)phenol (BHP) produced a clear neg. pattern by the exposure of 365 nm (10 mJ-cm<sup>-2</sup>) UV light, postbaked at 110°C for 3 min, and developed with a 0.3% TMAH aqueous solution

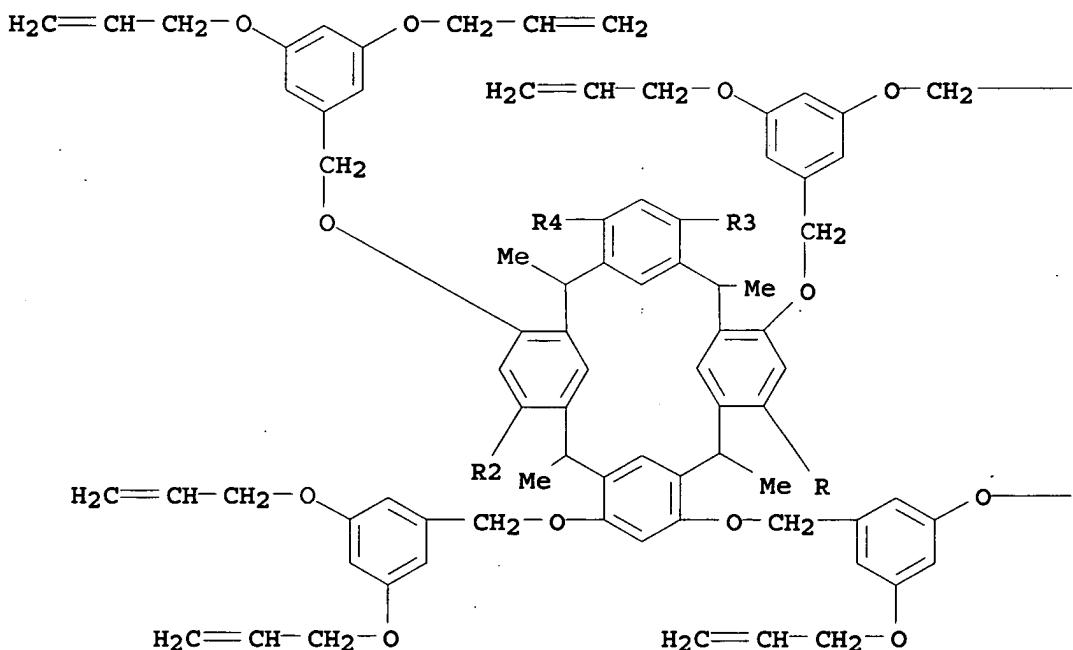
IT 196298-31-4P

(in synthesis of calix[4]-resorcinarene dendrimer for photoresist material)

RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyl)phenyl]methoxy]-2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

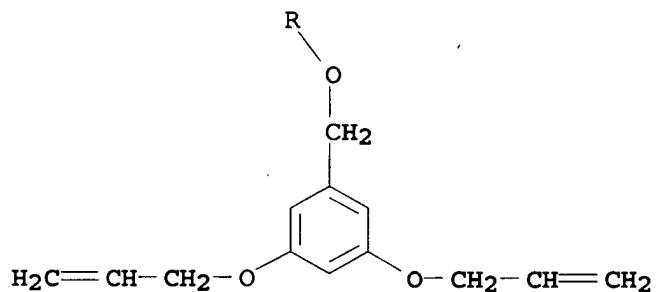
PAGE 1-A



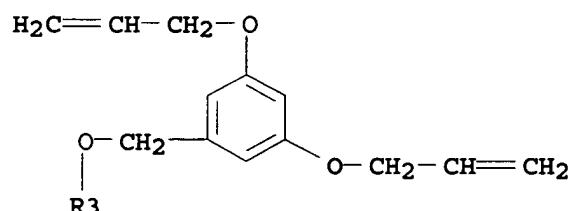
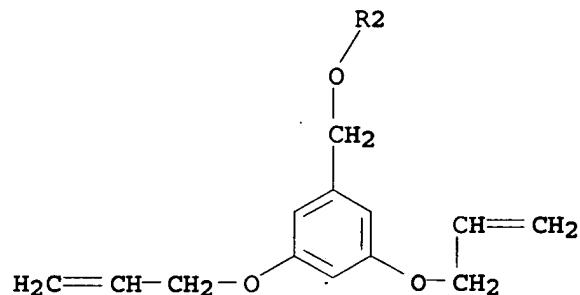
PAGE 1-B

 $\text{---CH=CH}_2$  $\text{---CH}_2\text{---CH=CH}_2$ 

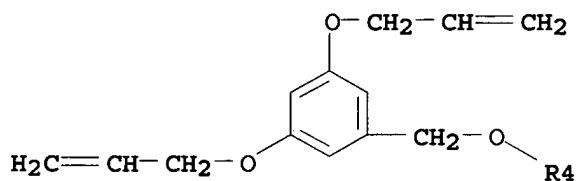
PAGE 2-A



PAGE 3-A



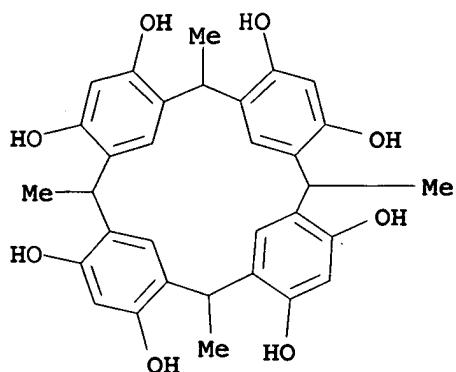
PAGE 4-A



IT 65338-98-9, Calix[4]resorcinarene  
 (neg.-working alkaline developable photoresists based on  
 calix[4]-resorcinarene and containing crosslinker and photoacid  
 generator)

RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
 4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



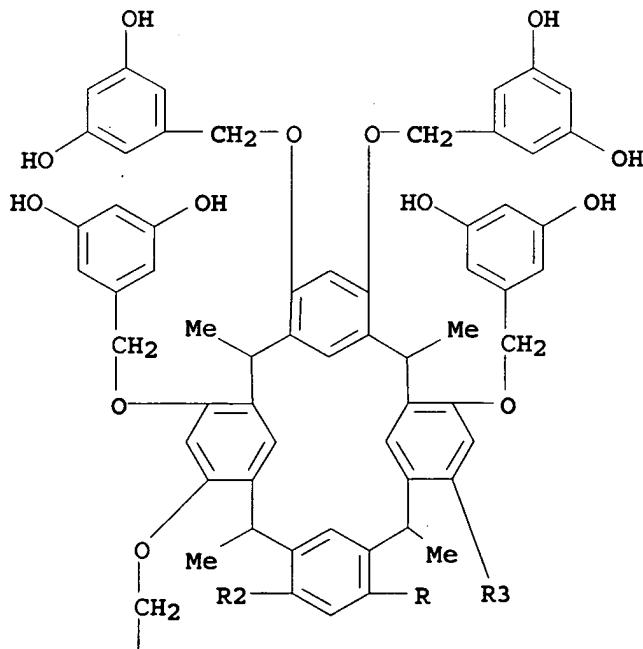
IT 196298-30-3P

(neg.-working alkaline developable photoresists based on calix[4]-resorcinarene dendrimer and containing crosslinker and photoacid generator)

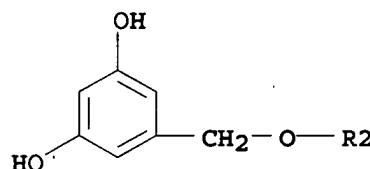
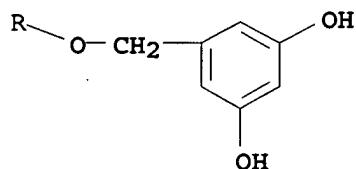
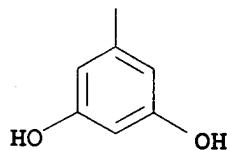
RN 196298-30-3 HCPLUS

CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''''',5'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)]octakis- (9CI) (CA INDEX NAME)

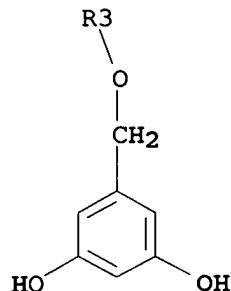
PAGE 1-A



PAGE 2-A



PAGE 3-A



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST photoresist calixarene dendrimer crosslinker photoacid generator  
 IT Crosslinking  
     (neg.-working alkaline developable photoresists based on calix[4]-resorcinarene and containing crosslinker and photoacid generator)  
 IT Dendritic polymers  
     Oligomers  
         (neg.-working alkaline developable photoresists based on calix[4]-resorcinarene dendrimer and containing crosslinker and photoacid generator)  
 IT 2937-59-9, 2,6-Bis(hydroxymethyl)phenol 13653-12-8,  
     4,4'-Methylenebis[2,6-bis(hydroxymethyl)-phenol]  
         (crosslinker; neg.-working alkaline developable photoresists based on calix[4]-resorcinarene dendrimer and containing crosslinker)

and photoacid generator)

IT 75-59-2, Tetramethylammonium hydroxide  
(developer; neg.-working alkaline developable **photoresists**  
based on calix[4]-resorcinarene dendrimer and containing crosslinker  
and photoacid generator)

IT 13965-03-2, Bis(triphenylphosphine)palladium dichloride  
(in synthesis of calix[4]-resorcinarene dendrimer for  
**photoresist** material)

IT 196298-31-4P  
(in synthesis of calix[4]-resorcinarene dendrimer for  
**photoresist** material)

IT 135710-38-2P 177837-80-8P 182058-69-1P  
(in synthesis of calix[4]-resorcinarene dendrimer for  
**photoresist** material)

IT 65338-98-9, Calix[4]resorcinarene  
(neg.-working alkaline developable **photoresists** based on  
calix[4]-resorcinarene and containing crosslinker and **photoacid**  
generator)

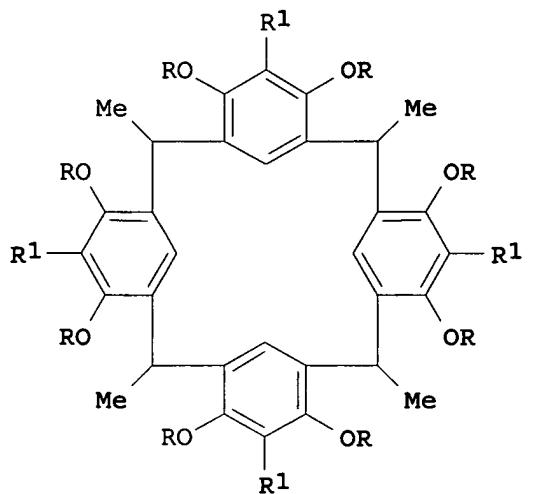
IT 196298-30-3P  
(neg.-working alkaline developable **photoresists** based on  
calix[4]-resorcinarene dendrimer and containing crosslinker and  
**photoacid** generator)

IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate  
(photoacid generator; neg.-working alkaline developable  
**photoresists** based on calix[4]-resorcinarene and containing  
crosslinker and photoacid generator)

IT 2150-44-9, Methyl 3,5-dihydroxybenzoate  
(reaction with bromopropene in synthesis of calix[4]-resorcinarene  
dendrimer for **photoresist** material)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L44 ANSWER 29 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1998:576949 HCPLUS  
DOCUMENT NUMBER: 129:316027  
TITLE: A new synthesis of tetrakis(C-methyl)octakis(hydroxyethyl)calix[4]resorcinarene via an ethoxy-tethered trimethylsiloxy precursor  
AUTHOR(S): Neda, Ion; Siedentop, Tjark; Vollbrecht, Alexander; Thoennessen, Holger; Jones, Peter G.; Schmutzler, Reinhard  
CORPORATE SOURCE: Institut Anorganische Analytische Chemie, Technische Universitaet Braunschweig, Braunschweig, D-38023, Germany  
SOURCE: Zeitschrift fuer Naturforschung, B: Chemical Sciences (1998), 53(8), 841-848  
CODEN: ZNBSN; ISSN: 0932-0776  
PUBLISHER: Verlag der Zeitschrift fuer Naturforschung  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 129:316027  
ED Entered STN: 10 Sep 1998  
GI

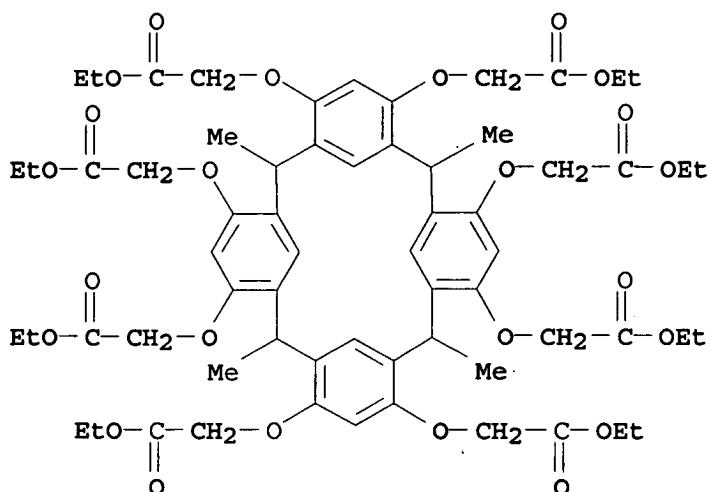


**AB** The octakis(trimethylsiloxy)calix[4]resorcinarenes, I (R = Me<sub>3</sub>Si; R<sub>1</sub> = H, Br), were synthesized by reaction of the corresponding alcs. I (R = H; R<sub>1</sub> = H, Br) with (Me<sub>3</sub>Si)<sub>2</sub>NH, and were found to exhibit dynamic behavior in solution. Temperature-dependent NMR investigations confirmed the presence of at least 2 conformational isomers of I (R = Me<sub>3</sub>Si, R<sub>1</sub> = H) in solution. The conformation of I (R = Me<sub>3</sub>Si, R<sub>1</sub> = H) in the solid state was determined by an x-ray crystal structure anal. The calixarene displays a boat conformation. The introduction of the ethoxy group as a spacer was effected via reaction of I (R, R<sub>1</sub> = H) with BrCH<sub>2</sub>CO<sub>2</sub>Et and subsequent reduction with LiAlH<sub>4</sub> forming the ethoxy-tethered C-methylcalix[4]resorcinarene I [R = (CH<sub>2</sub>)<sub>2</sub>OH, R<sub>1</sub> = H] in an impure state. Reaction of crude I [R = (CH<sub>2</sub>)<sub>2</sub>OH, R<sub>1</sub> = H] with (Me<sub>3</sub>Si)<sub>2</sub>NH furnished the ethoxy-tethered octakis(trimethylsiloxy)calix[4]resorcinarene I [R = (CH<sub>2</sub>)<sub>2</sub>OSiMe<sub>3</sub>, R<sub>1</sub> = H]. Subsequent hydrolysis led to pure I [R = (CH<sub>2</sub>)<sub>2</sub>OH, R<sub>1</sub> = H].

**IT** 171799-35-2P  
(preparation and conformational anal. of octakis(hydroxyethyl)calix[4]resorcinarene)

**RN** 171799-35-2 HCAPLUS

**CN** Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-1,1',1'',1''',1'''',1''''',1''''''',1'''''''-octaethyl ester (CA INDEX NAME)



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 22, 75

IT 65378-51-0P 171799-35-2P 214678-08-7P  
 (preparation and conformational anal. of octakis(hydroxyethyl)calix[4]resorcinarene)

L44 ANSWER 30 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:561964 HCPLUS

DOCUMENT NUMBER: 129:260215

TITLE: Selective Derivatizations of Resorcarenes. 4.  
 General Methods for the Synthesis of  
 C2v-Symmetrical Derivatives

AUTHOR(S): Shivanyuk, Alexander; Paulus, Erich F.; Boehmer,  
 Volker; Vogt, Walter

CORPORATE SOURCE: Institut fuer Organische Chemie, Johannes  
 Gutenberg-Universitaet, Mainz, D-55099, Germany

SOURCE: Journal of Organic Chemistry (1998),  
 63(19), 6448-6449

PUBLISHER: CODEN: JOCEAH; ISSN: 0022-3263  
 American Chemical Society

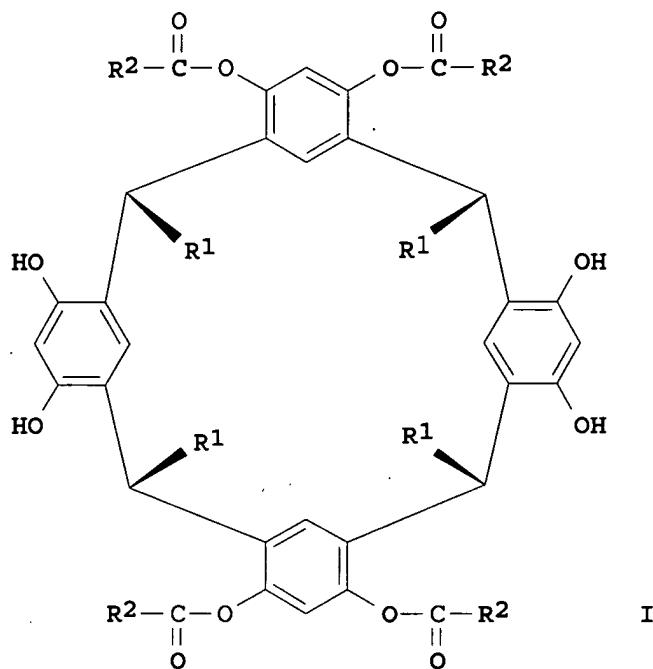
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:260215

ED Entered STN: 04 Sep 1998

GI



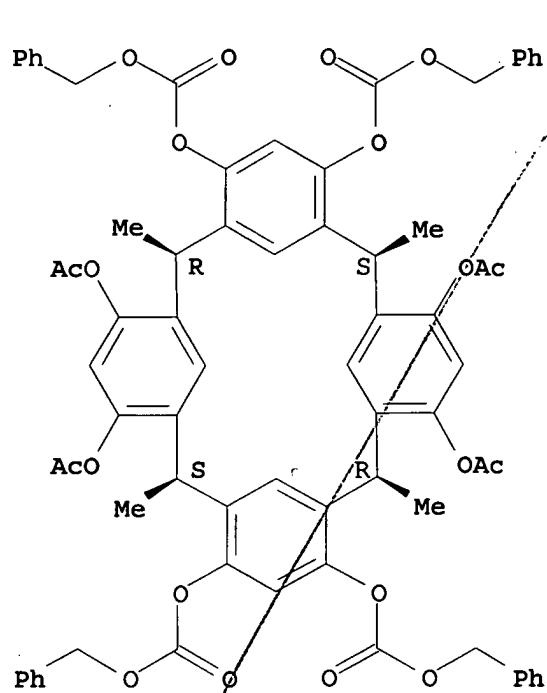
AB Regioselective tetraacylation of resorcarenes was achieved with aroyl and heteroaryl chlorides or benzyl chloroformate in MeCN in the presence of Et<sub>3</sub>N. The tetraesters I (R<sub>1</sub> = Me, pentyl, PhCH<sub>2</sub>CH<sub>2</sub>, R<sub>2</sub> = aroyl, heteroaroyl, or PhCH<sub>2</sub>O) obtained in gram quantities are promising intermediates for the preparation of C<sub>2v</sub>-sym. tetraethers, aliphatic tetraesters, and resorcarenne derivs. selectively substituted in the 2-positions of opposite resorcinol rings. The single-crystal x-ray structures of I.5DMSO (R<sub>1</sub> = Me, R<sub>2</sub> = 4-MeC<sub>6</sub>H<sub>4</sub>) and I.3MeCN.H<sub>2</sub>O (R<sub>1</sub> = pentyl, R<sub>2</sub> = 4-MeC<sub>6</sub>H<sub>4</sub>) are described.

IT 213666-81-0P 213666-82-1P 213666-83-2P  
(preparation and catalytic hydrogenation of)

RN 213666-81-0 HCPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrakis(acetyloxy)-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetracyl tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

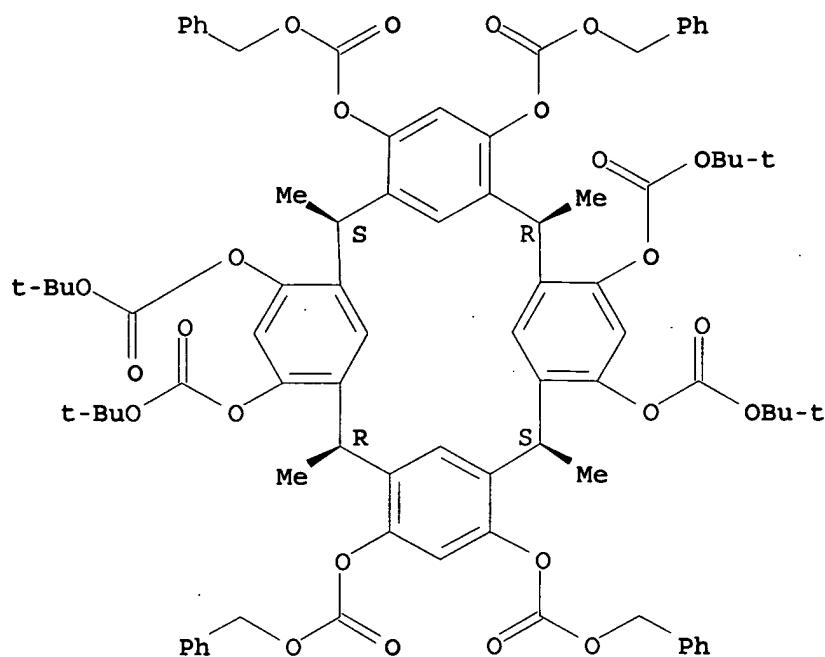
Relative stereochemistry.



RN 213666-82-1 HCPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrakis[[(1,1-dimethylmethoxy)carbonyl]oxy]-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.

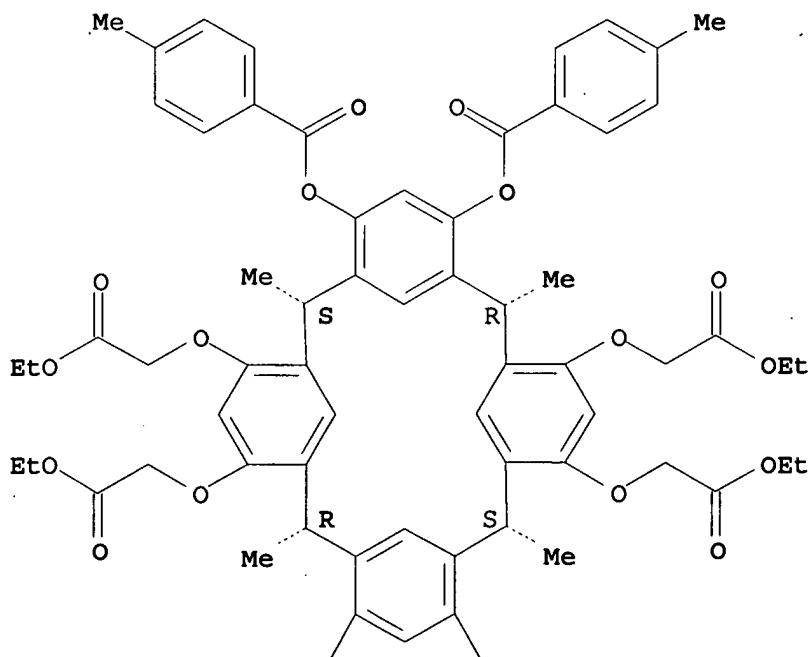


RN 213666-83-2 HCAPLUS

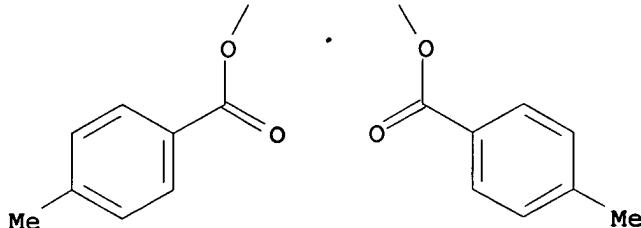
CN Benzoic acid, 4-methyl-, (2R,8S,14R,20S)-10,12,22,24-tetrakis(2-ethoxy-2-oxoethoxy)-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

PAGE 1-A



PAGE 2-A

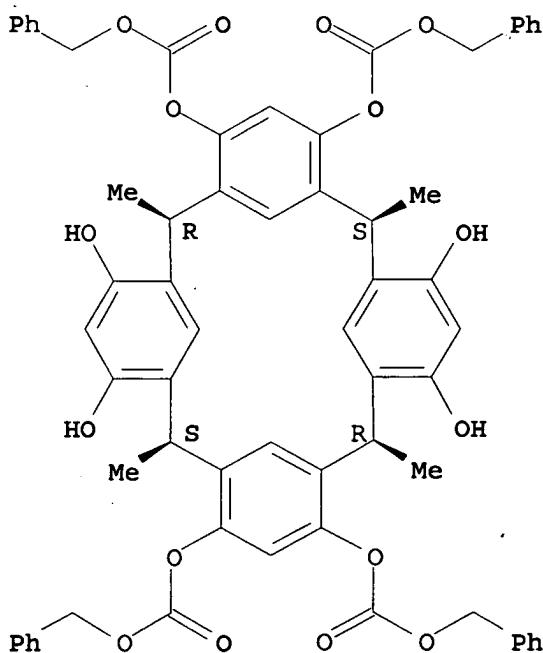


IT 213666-71-8P  
(preparation and esterification of)

RN 213666-71-8 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

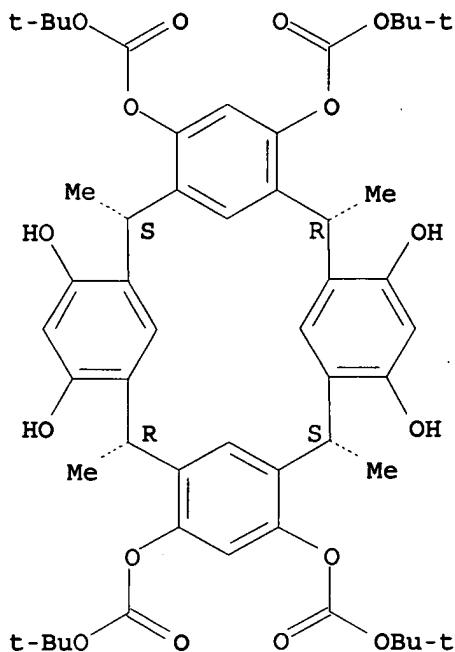


IT 213666-85-4P  
(preparation and regioselective aminomethylation of)

RN 213666-85-4 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(1,1-dimethylethyl) ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 75

IT 213666-81-0P 213666-82-1P 213666-83-2P

(preparation and catalytic hydrogenation of)

IT 213666-71-8P

(preparation and esterification of)

IT 213666-85-4P

(preparation and regioselective aminomethylation of)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 31 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:475830 HCPLUS

DOCUMENT NUMBER: 129:181991

TITLE: Structural design of resin matrix and acid-labile dissolution inhibitor of chemical amplification positive electron-beam resist for gigabit lithography

AUTHOR(S): Sakamizu, Toshio; Arai, Tadasi; Katoh, Kohji; Uchino, Shou-ichi; Murai, Fumio; Suzuki, Yasunori; Shiraishi, Hiroshi

CORPORATE SOURCE: Cent. Res. Lab., Hitachi, Ltd., Kokubunji, Tokyo, 185-8601, Japan

SOURCE: Journal of Photopolymer Science and Technology (1998), 11(4), 547-552

CODEN: JSTEEW; ISSN: 0914-9244

PUBLISHER: Technical Association of Photopolymers, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

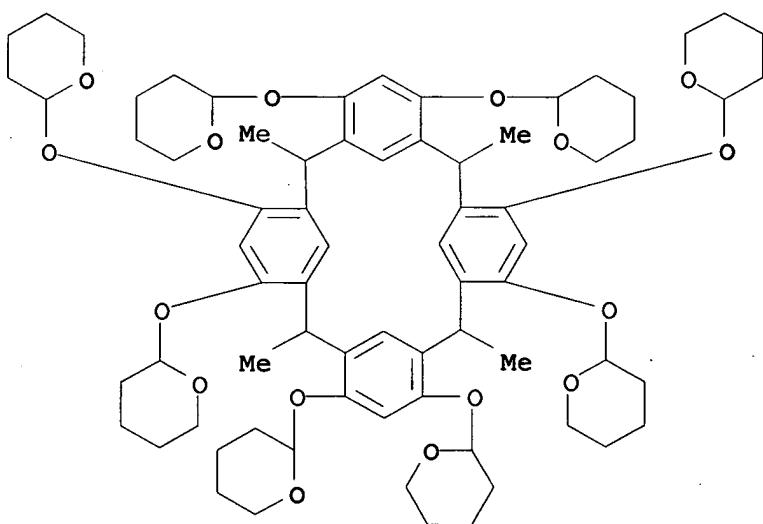
ED Entered STN: 03 Aug 1998

AB The effect of m/p-cresol novolak mol.-weight-distribution (MWD) and dissoln. inhibitor structure on resist performance were investigated. A novolak resin richer in p-cresol ratio gave a large dissoln. inhibition capability of polymeric dissoln. inhibitor, tetrahydropyranyl (THP) protected-polymeric dissoln. inhibitor. In particular, a high mol.-weight novolak resin richer in p-cresol ratio was regarded as an effective matrix of a chemical amplification (CA) pos. resist. THP-protected phenolic compds. with extended backbone structures showed a large dissoln. inhibition. The resist with MWD controlled resin and a THP-protected phenolic compound can achieve high resolution patterns (100-nm contact holes) with high sensitivity (6.0  $\mu$ C/cm<sup>2</sup>).

IT 211427-64-4  
(effect of m/p-cresol novolak mol.-weight-distribution and phenolic dissoln. inhibitor structure on electron-beam lithog. resist performance)

RN 211427-64-4 HCPLUS

CN 2H-Pyran, 2,2',2'',2''',2'''',2''''',2''''''',2''''''''-[ (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis[tetrahydro- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

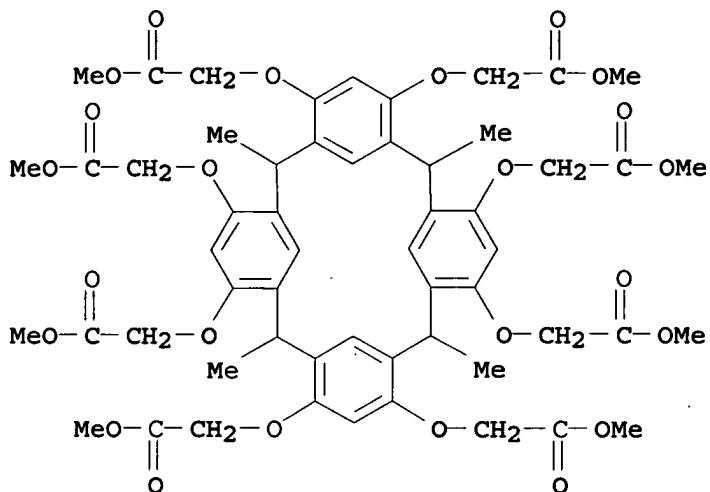
IT 23358-99-8 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer  
79267-06-4, 2,6-Bis(hydroxymethyl)-p-cresol-m-Cresol-p-cresol-formaldehyde copolymer 211427-63-3 211427-64-4  
211427-65-5

(effect of m/p-cresol novolak mol.-weight-distribution and phenolic dissoln. inhibitor structure on electron-beam lithog. resist performance)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 32 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1998:37489 HCPLUS

DOCUMENT NUMBER: 128:175589  
 TITLE: Highly efficient separation of amines by electrokinetic chromatography using resorcarene-octacarboxylic acids as pseudostationary phases  
 AUTHOR(S): Bazzanella, Alexis; Morbel, Hagen; Bachmann, Knut; Milbradt, Robert; Bohmer, Volker; Vogt, Walter  
 CORPORATE SOURCE: Fachbereich Chemie, Technische Hochschule Darmstadt, Petersenstrasse 18, Darmstadt, 64287, Germany  
 SOURCE: Journal of Chromatography, A (1997), 792(1 + 2), 143-149  
 CODEN: JCRAEY; ISSN: 0021-9673  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 23 Jan 1998  
 AB Resorcarene-octacarboxylic acids, macrocyclic mols. built up by four alkylidene-bridged resorcinol units, were synthesized and used as pseudostationary phases in electrokinetic chromatog. (EKC). Resorcarenes provide a stable structure and good solubility in electrolytes even with organic modifiers. The high electrophoretic mobility of the resorcarene-octacarboxylic acids introduced here as pseudostationary phases is based on the eight partly deprotonated carboxylic groups. This offers a broad migration time window, which is the main parameter for the resolution of peaks. From three compds. with different alkyl chain lengths (C1, C5, C11), the C11-resorcarene-octa-acid possesses an extremely high selectivity for lipophilic compds. which is demonstrated by the efficient separation of thirteen homologous or isomeric amines derivatized with o-phthaldialdehyde and 2-mercaptoethanol. The order of peak elution is almost identical with that known in reversed-phase HPLC. Sensitive detection of amines is achieved using laser-induced fluorescence. Efficiencies up to 3 million plates/m were obtained resulting from the small detection window based on the intense focusing of the laser beam, a sample focusing effect in the sample zone and the absence of electrophoretic microheterogeneity of the pseudostationary phase.  
 IT 203063-80-3  
 (in preparation of resorcarene-octacarboxylic acids as pseudostationary phases for separation of amines by electrokinetic chromatog.)  
 RN 203063-80-3 HCAPLUS  
 CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octamethyl ester (9CI) (CA INDEX NAME)



CC 80-4 (Organic Analytical Chemistry)  
 IT 96-32-2, Methyl bromoacetate 169888-22-6 202999-14-2  
**203063-80-3**

(in preparation of resorcarenne-octacarboxylic acids as pseudostationary phases for separation of amines by electrokinetic chromatog.)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 33 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:582349 HCPLUS

DOCUMENT NUMBER: 127:270381

TITLE: A positive-working alkaline developable photoresist based on benzylether dendrimer and a dissolution inhibitor

AUTHOR(S): Haba, Osamu; Haga, Kohji; Ueda, Mitsuru

CORPORATE SOURCE: Department of Human Sensing and Functional Sensor engineering, Graduate School of Engineering, Yamagata University, Yonezawa, 992, Japan

SOURCE: Polymeric Materials Science and Engineering (1997), 77, 426-427

CODEN: PMSEDG; ISSN: 0743-0515

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 Sep 1997

AB Dendrimers are polymers with a new mol. architecture, which is characterized by possessing central poly-functional core, from which arise successive layers of monomer units with a branch occurring at each monomer unit. They are monodisperse materials as well as the calixarene, and their mol. weight reaches ten thousands as well as the novolak resin. Thus the dendrimers are promising material for high sensitive photoresists. We designed a new dendrimer which contains phenol groups in the exterior to be soluble in aqueous alkaline solution

and calix[4]resorcinarene in the interior to increase the number of the phenol group even in the lower generation. We now report new pos.-working alkaline developable photoresist based on this dendrimer.

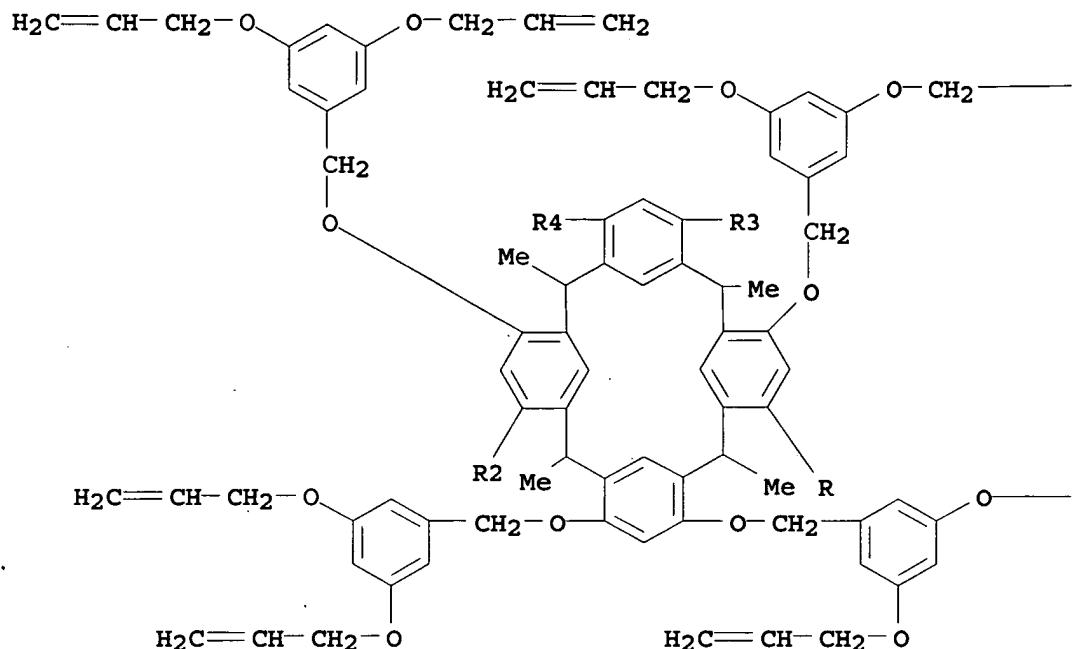
IT 196298-31-4P

(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

RN 196298-31-4 HCPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyl)phenyl]methoxy]-2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

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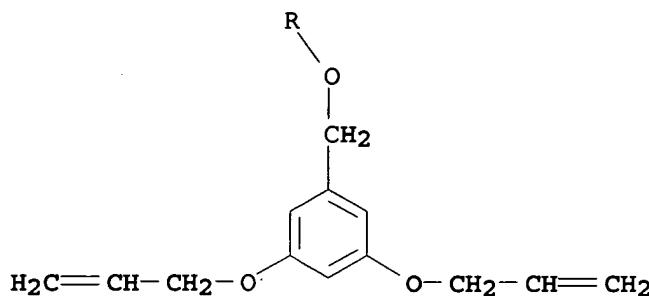


PAGE 1-B

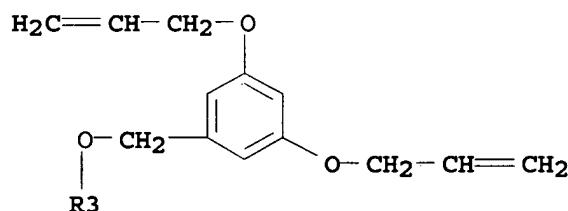
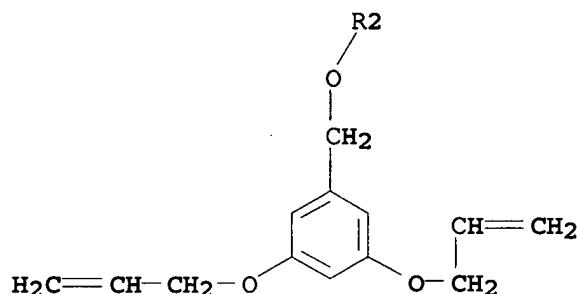
— CH=CH<sub>2</sub>

— CH<sub>2</sub>—CH=CH<sub>2</sub>

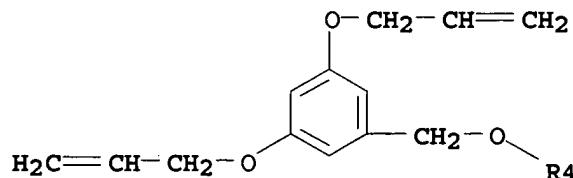
PAGE 2-A



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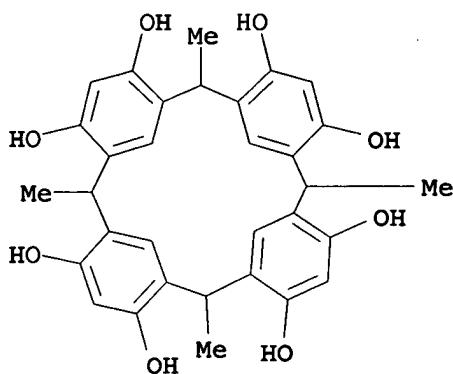
PAGE 4-A



IT 65338-98-9, Calix[4]resorcinarene  
(pos.-working alkaline developable photoresist based on  
benzyl-ether dendrimer and dissoln. inhibitor)

RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-  
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-  
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



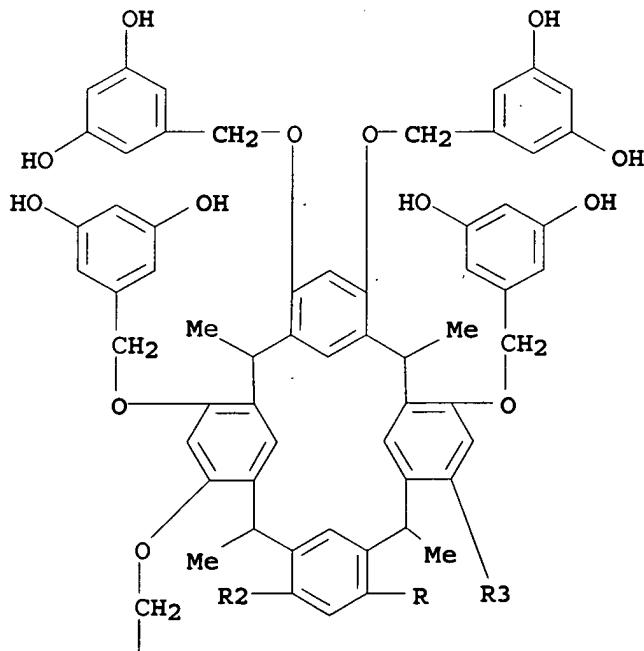
IT 196298-30-3P

(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

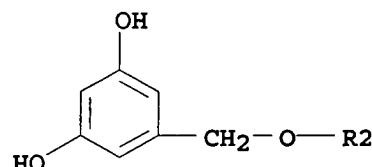
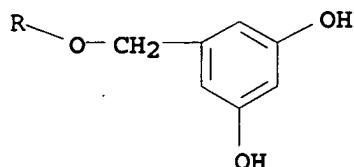
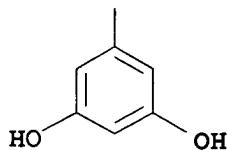
RN 196298-30-3 HCAPLUS

CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''''',5'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)]octakis- (9CI) (CA INDEX NAME)

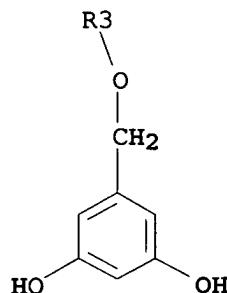
PAGE 1-A



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CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST pos alk developable **photoresist** benzylether dendrimer  
 IT **Photoresists**  
     (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)  
 IT Dendritic polymers  
     (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)  
 IT 84522-08-7, 2,3,4-Tris(1-oxo-2-diazonaphthoquinone-4-sulfonyloxy)benzophenone  
     (dissoln. inhibitor; pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)  
 IT 135710-38-2 177837-80-8 182058-69-1  
     (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)

IT 67-64-1, 2-Propanone, uses 75-59-2, Tetramethylammonium hydroxide 109-99-9, THF, uses 111-96-6, Bis(2-methoxyethyl)ether 123-91-1, 1,4-Dioxane, uses  
(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

IT 196298-31-4P  
(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

IT 106-95-6, 3-Bromopropene, reactions 540-69-2, Ammonium formate 558-13-4, Carbon bromide (CBr4) 584-08-7, Potassium carbonate (K2CO3) 603-35-0, Triphenylphosphine, reactions 2150-44-9, Methyl-3,5-dihydroxy-benzoate 7681-82-5, Sodium iodide (NaI), reactions 13965-03-2, Bis(triphenylphosphine)palladium dichloride 16853-85-3 17455-13-9, 1,4,7,10,13,16-Hexaoxacyclooctadecane 53208-22-3, Diazonaphthoquinone 65338-98-9, Calix[4]resorcinarene  
(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

IT 196298-30-3P  
(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

L44 ANSWER 34 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:248299 HCPLUS

DOCUMENT NUMBER: 126:343376

TITLE: Synthesis and solvent inclusion complexation studies of benzoyl derivatives of resorcinol-aldehyde tetramers by 1H NMR and thermogravimetric analysis

AUTHOR(S): Singh, Harmit; Singh, Serjinder

CORPORATE SOURCE: Dep. Food Sci. and Technol., Guru Nanak Dev Univ., Amritsar, 143005, India

SOURCE: Journal of Chemical Research, Synopses (1997), (3), 72-73

CODEN: JRPSDC; ISSN: 0308-2342

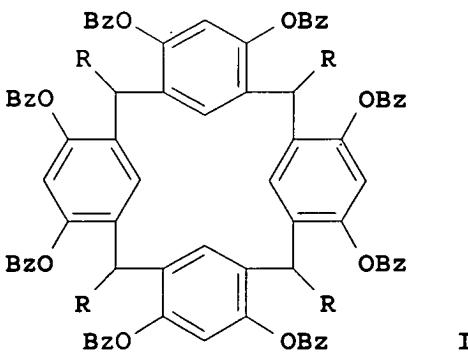
PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 17 Apr 1997

GI



AB Resorcinol-aldehyde cyclophane benzoyl derivs. I [R = Me, Ph, 4-(benzoyloxy)phenyl] have been synthesized in order to observe their binding behavior in inclusion complex formation with solvent mols.

using thermogravimetric and  $^1\text{H}$  NMR techniques.

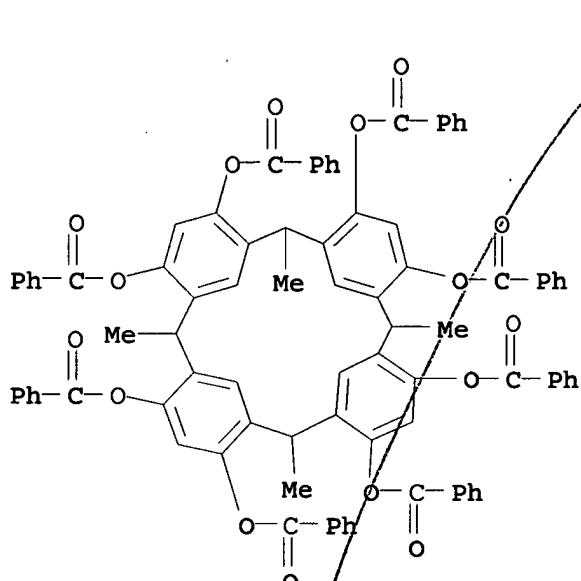
IT 189767-13-3P  
 (inclusion complexation by benzoyl derivs. of resorcinol-aldehyde tetramers)

RN 189767-13-3 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, octabenoate, stereoisomer, compd. with tetrahydrofuran (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 136429-58-8  
 CMF C88 H64 O16



CM 2

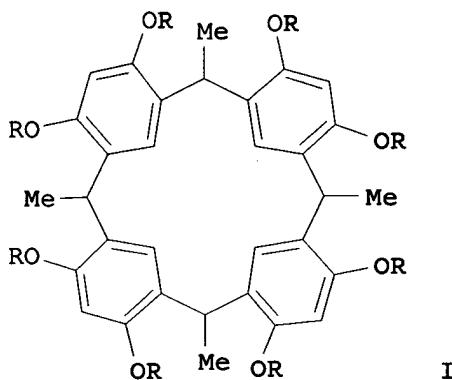
CRN 109-99-9  
 CMF C4 H8 O



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 22

IT 189767-06-4P 189767-07-5P 189767-08-6P 189767-09-7P  
 189767-10-0P 189767-11-1P 189767-12-2P 189767-13-3P  
 189767-14-4P 189767-15-5P 189767-16-6P 189767-17-7P  
 189767-18-8P 189767-19-9P 189767-20-2P 189767-21-3P  
 189767-22-4P  
 (inclusion complexation by benzoyl derivs. of resorcinol-aldehyde tetramers)

ACCESSION NUMBER: 1997:7345 HCAPLUS  
 DOCUMENT NUMBER: 126:117630  
 TITLE: A calixresorcinarene provides the framework for an artificial esterase  
 AUTHOR(S): Pirrinciooglu, Necmettin; Zaman, Flora; Williams, Andrew  
 CORPORATE SOURCE: Dep. Chem., Univ. Kent, Canterbury, Kent, CT2 7NH, UK  
 SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1996), (12), 2561-2562  
 CODEN: JCPKBH; ISSN: 0300-9580  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 08 Jan 1997  
 GI

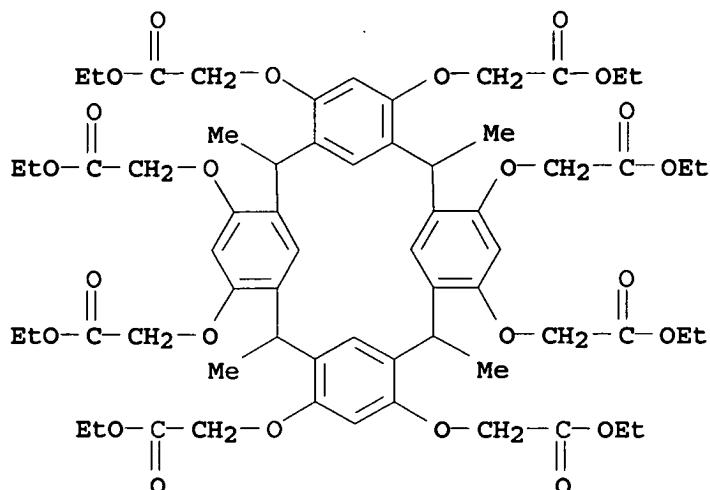


AB An octakis(dimethylaminopropyl)calixresorcin[4]arene [I; R = CH<sub>2</sub>CONH(CH<sub>2</sub>)<sub>3</sub>NMe<sub>2</sub>] is a primitive artificial esterase for 4-nitrophenyl esters. The system provides both concave binding site and catalytic function within the same mol.

IT 171799-35-2P  
 (calixresorcinarene as an artificial esterase for 4-nitrophenyl esters)

RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-1,1',1'',1''',1'''',1''''',1''''''',1'''''''-octaethyl ester (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)

Section cross-reference(s): 7

IT 65338-98-9P 171799-35-2P

(calixresorcinarene as an artificial esterase for 4-nitrophenyl esters)

REFERENCE COUNT:

27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 36 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:605706 HCPLUS

DOCUMENT NUMBER: 125:261903

TITLE: Mesomorphic properties and monolayer behavior of novel liquid crystalline exo-calix[4]arene derivatives

AUTHOR(S): Budig, Hansjoerg; Diele, Siegmar; Paschke, Reinhard; Stroehl, Dieter; Tschierske, Carsten

CORPORATE SOURCE: Inst. Org. Chem., Martin-Luther Univ., Halle/Saale, D-06120, Germany

SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1996), (9), 1901-1906

CODEN: JCPKBH; ISSN: 0300-9580

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Oct 1996

AB Novel calix[4]arene derivs. were synthesized. These are pyrogallol-derived exo-calix[4]arenes with twelve 3-oxaalkanoyloxy chains and exo-calix[4]arenes in which eight or twelve rod-like units (phenylthiadiazole and phenylpyrimidine units) are fixed via spacers with the calix[4]arene central core. The liquid crystalline properties of these compds. were studied by thermal optical microscopy between crossed polarizers, by DSC and some of them also by x-ray diffraction. One of the 3-oxaalkanoates forms a hexagonal columnar mesophase, whereas most of the compds. incorporating calamitic units in the lateral chains give liquid crystalline materials with a smectic A-phase. Also the behavior of selected compds. as thin films at the air-H<sub>2</sub>O interface was studied using the Langmuir technique. They form condensed films whereby the mol. areas at the collapse points are

determined by the densely packed lateral chains.

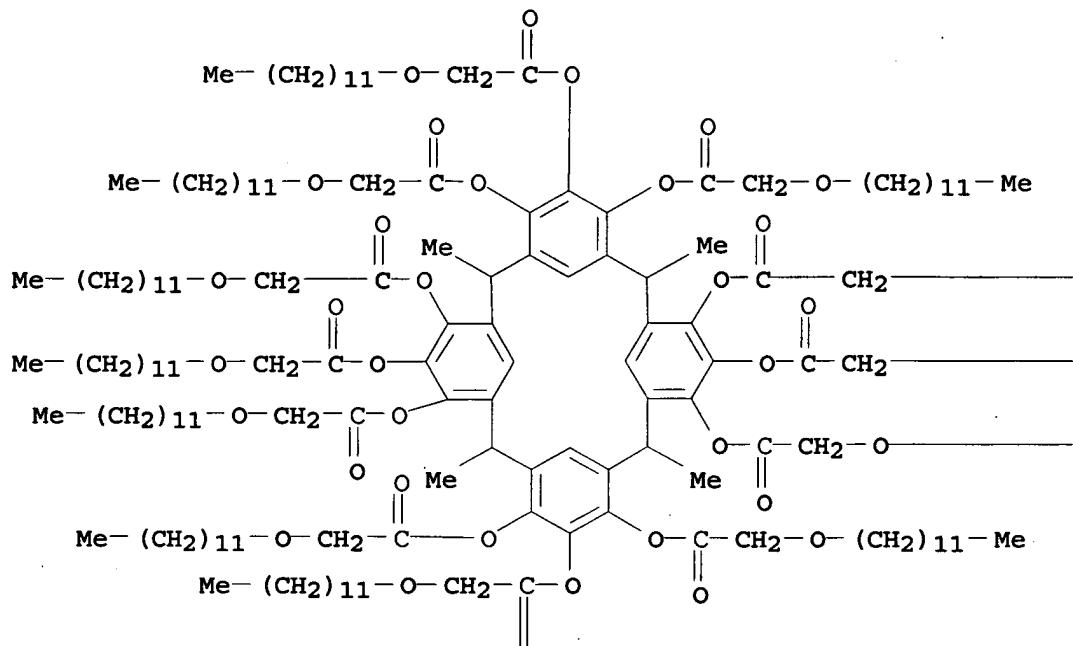
IT 182225-44-1P

(preparation and liquid crystal properties and monolayer behavior of)

RN 182225-44-1 HCAPLUS

CN Acetic acid, (dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13, 7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,5,6,10,11,12,16,17,18,22,23,24-dodecyl ester (9CI) (CA INDEX NAME)

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— O—(CH<sub>2</sub>)<sub>11</sub>—Me

— O—(CH<sub>2</sub>)<sub>11</sub>—Me

— (CH<sub>2</sub>)<sub>11</sub>—Me

PAGE 2-A



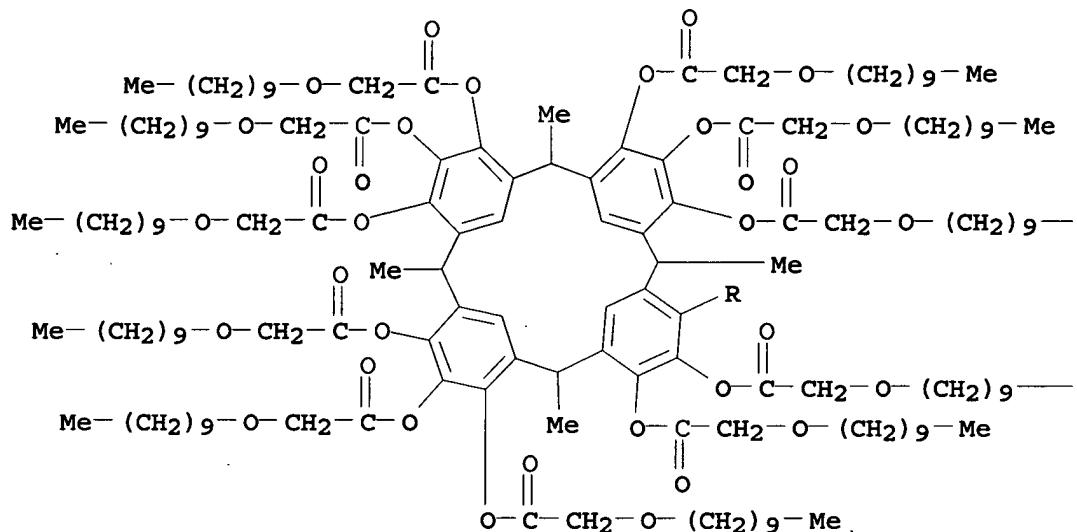
IT 153497-75-7P

(preparation and melting temperature of)

RN 153497-75-7 HCPLUS

CN Acetic acid, (decyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl ester (9CI) (CA INDEX NAME)

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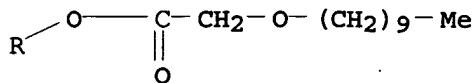


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— Me

— Me

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CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 25  
 IT 182225-44-1P 182371-71-7P 182371-74-0P 182371-76-2P  
 (preparation and liquid crystal properties and monolayer behavior of)  
 IT 153497-75-7P 182371-72-8P 182371-75-1P  
 (preparation and melting temperature of)

L44 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:994163 HCAPLUS

DOCUMENT NUMBER: 124:55584

TITLE: Preparation of calixarene-based compounds having  
antibacterial, antifungal, anticancer, and  
anti-HIV activity

INVENTOR(S): Harris, Stephen J.

PATENT ASSIGNEE(S): Ire.

SOURCE: PCT Int. Appl., 148 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9519974	A2	19950727	WO 1995-IE8	19950124

WO 9519974 A3 19950921  
 W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, FI, GB, HU,  
 JP, KP, LU, NO, RO, UA, US  
 RW: AT, BE, CH, DE, ES, FR, GB, GR, IE, LU, NL, SE, GA, ML, NE,  
 SN, TD, TG

AU 9515453	A	19950808	AU 1995-15453	19950124
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PRIORITY APPLN. INFO.:	IE 1994-57	A 19940124
	WO 1995-IE8	A 19950124

OTHER SOURCE(S): MARPAT 124:55584

ED Entered STN: 22 Dec 1995

GI For diagram(s), see printed CA Issue.

AB Calixarene-based compds., which are calixarenes or oxacalixarenes, acyclic phenyl-formaldehyde oligomers, cyclotrimeratrylene derivs., cyclic tetrameric resorcinol-aldehyde derivs. known as Hogberg compds. and cyclic tetrameric pyrogallol-aldehyde derivs., are prepared. For example, calixarenes or oxacalixarenes are represented by general formula [I; n + m = 3-8; m = 0-3; n = 0-8; R1 = H, halo, hydrocarbyl, aryl, (un)substituted hydrocarbylaryl, NO2, SO3M1; wherein M1 = alkali metal, SO3H; R1 = OR2; wherein R2 = CH2CO2R3, CH2CO2Mp/p, CH2CONR4R5; wherein R3 = (un)substituted alkyl; M = metal, ammonium ion; p = the charge on the metal ion; R4 or R5 may be the same or different, or both may be part of amino acid ester of poly(amino acid ester) or one or more of the same or different amino acids or part of a cyclic polyene antibiotic/antifungal drug or part of a cyclic nitrogen

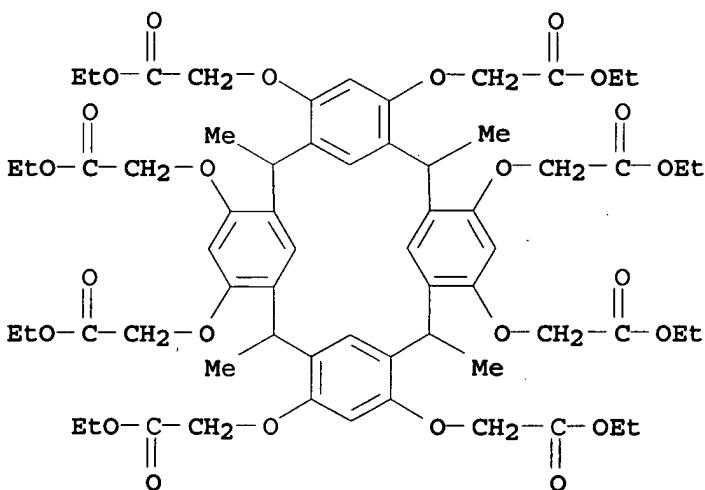
heterocycle; X = halo, NO<sub>2</sub>, CO<sub>2</sub>H, cyano, other electron withdrawing group]. Thus, n-butyraldehyde and pyrogallol in a 1:4 mixture of 37% aqueous HCl and EtOH was refluxed under N for 90 min to give a cyclic tetramer (II; R = X = H), which was brominated with Br in CHCl<sub>3</sub> to II (R = H, X = Br) and etherified with Et bromoacetate in the presence of K<sub>2</sub>CO<sub>3</sub> in refluxing acetone to give II (R = CH<sub>2</sub>CO<sub>2</sub>Et, X = Br). The latter compound was saponified with KOH in refluxing EtOH, acidified with aqueous HCl, and treated with 25% aqueous NH<sub>4</sub>OH to give II (R = CH<sub>2</sub>CO<sub>2</sub>-NH<sub>4</sub><sup>+</sup>, X = Br). The latter compound in vitro inhibited the infection of C8166 cells with HIV-2, SIV (Simian immunodeficiency virus), and HIV-1 with EC<sub>50</sub> of 10, 20, and 0.03  $\mu$ M.

IT 171799-35-2P 171799-38-5P

(preparation of calixarene-based compds. having antibacterial, antifungal, anticancer, and anti-HIV activity)

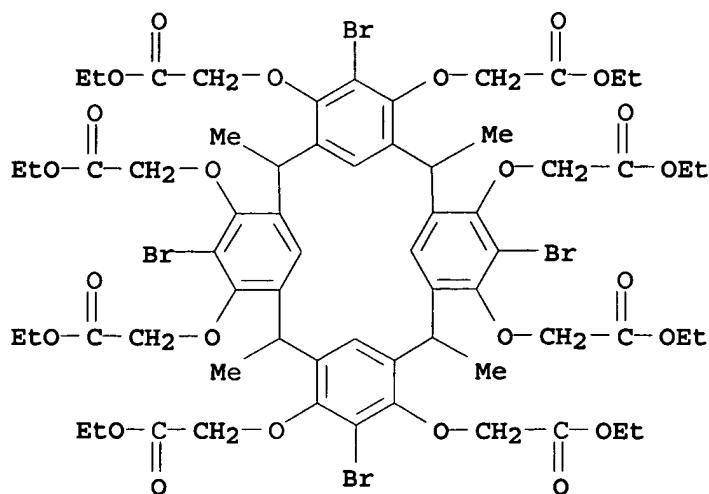
RN 171799-35-2 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''-[2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)octakis-, 1,1',1'',1''',1'''',1''''',1''''''',1''''''''-octaethyl ester (CA INDEX NAME)



RN 171799-38-5 HCPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''-[5,11,17,23-tetrabromo-2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)octakis-, octaethyl ester (9CI) (CA INDEX NAME)



IC C07D313-00

CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

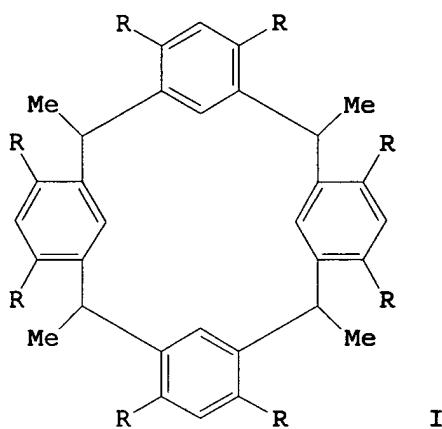
Section cross-reference(s): 1

IT	42042-78-4P	65338-98-9P	85097-22-9P	92003-62-8P	97600-39-0P
	97600-49-2P	109051-63-0P	110242-20-1P	114155-16-7P	
	116352-85-3P	116851-59-3P	119191-55-8P	121328-56-1P	
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171800-04-7P	171800-05-8P	171800-06-9P	171800-07-0P
171800-08-1P			

(preparation of calixarene-based compds. having antibacterial,  
antifungal, anticancer, and anti-HIV activity)

L44 ANSWER 38 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1994:507688 HCPLUS  
 DOCUMENT NUMBER: 121:107688  
 TITLE: Bowl shaped molecules as enzyme models  
 AUTHOR(S): Singh, Serjinder; Singh, Harmit; Sharma, Lalit  
 CORPORATE SOURCE: Dep. Chem., Guru Nanak Dev Univ., Amritsar, 143  
 005, India  
 SOURCE: Indian Journal of Chemistry, Section B: Organic  
 Chemistry Including Medicinal Chemistry (1994), 33B(5), 428-31  
 CODEN: IJSBDB; ISSN: 0376-4699  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 03 Sep 1994  
 GI



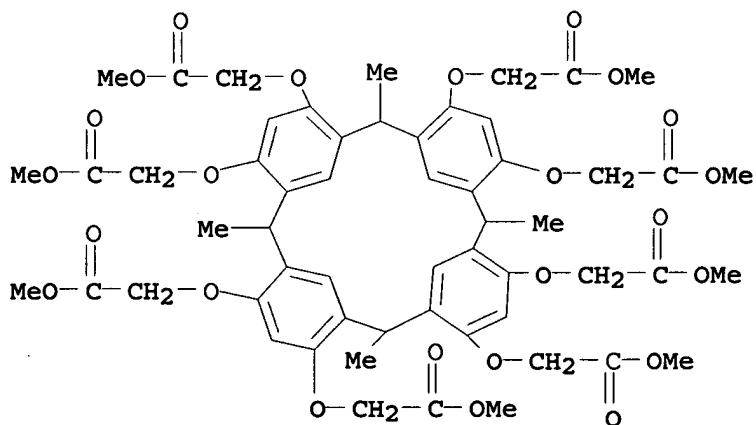
AB Resorcinol-aldehyde tetramers [I; R=OH, OCOMe (II), OCH<sub>2</sub>COOH] possessing bowl shaped structures with hydrophobic cavity, prepared under acidic conditions, have been studied by <sup>1</sup>H NMR spectral studies are shown to form host-guest complexes with a variety of guests like pyridinium methiodides. These cyclophanes help in solubilizing different hydrocarbons in the aqueous phase. Although the discrimination favors benzene due to its complementarity to the cavity, the association constant is higher valued for acetophenone showing that hydrogen-bonding plays an important role in host-guest complex formation. The host-guest complexation is further utilized to catalyze or inhibit the hydrolysis of N-methyl-p-nitrophenylnicotinium iodide and aminolysis of tetramer II as compared to resorcinol diacetate with different amines.

IT 156544-05-7P

(preparation of)

RN 156544-05-7 HCPLUS

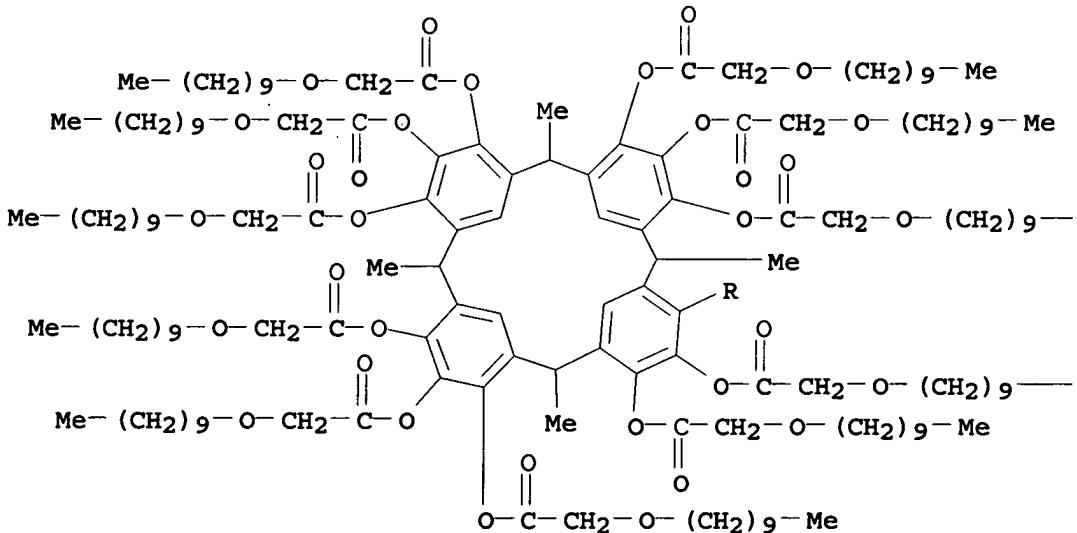
CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''''',2'''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-1,1',1'',1''',1''''',1''''''',1'''''''',1'''''''-octamethyl ester (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)  
 IT 156544-05-7P  
 (preparation of)

L44 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1994:205125 HCAPLUS  
 DOCUMENT NUMBER: 120:205125  
 TITLE: Bowl-shaped liquid crystals - new derivatives of cyclotriveratrylene and calix[4]arene  
 AUTHOR(S): Budig, H.; Paschke, R.; Diele, S.; Letko, I.; Pelzl, G.  
 CORPORATE SOURCE: Inst. Org. Chem., Martin-Luther-Univ., Halle/Saale, D-06120, Germany  
 SOURCE: Berichte der Bunsen-Gesellschaft (1993), 97(10), 1355-7  
 CODEN: BBPCAX; ISSN: 0005-9021  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 16 Apr 1994  
 AB Some new Calix[4]arenes and Cyclotriveratrylenes incorporating cyclohexane rings, Ph rings or ether O atoms in their lateral chains were synthesized and studied by calorimetry and x-ray studies. Only some long chain calix[4]arenes exhibit mesomorphic behavior. The mesomorphic ranges and clearing temps. of the mesophases of hexasubstituted cyclotriveratrylenes are largely increased by the introduction of cyclohexane rings or O atoms into the alkyl chains. X-ray studies proved the columnar structure of the mesophases.  
 IT 153497-75-7P (liquid crystal, preparation and properties of)  
 RN 153497-75-7 HCAPLUS  
 CN Acetic acid, (decyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octyl ester (9CI) (CA INDEX NAME)

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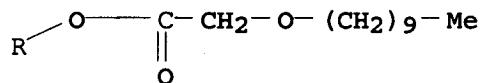


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— Me

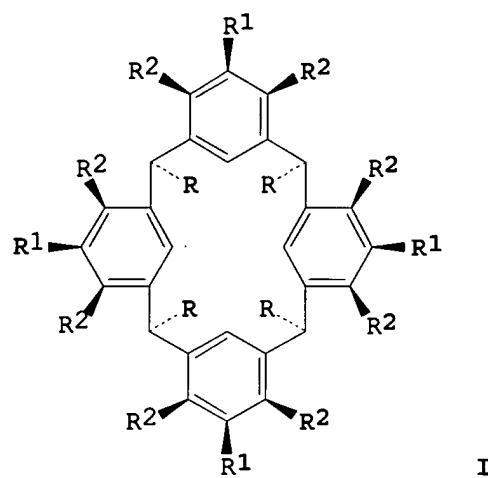
— Me

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CC 75-11 (Crystallography and Liquid Crystals)  
IT 153497-67-7P 153497-68-8P 153497-69-9P 153497-70-2P  
153497-71-3P 153497-72-4P 153497-73-5P 153497-74-6P  
153497-75-7P 153547-56-9P 153603-05-5P  
(liquid crystal, preparation and properties of)

L44 ANSWER 40 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1991:92279 HCPLUS  
DOCUMENT NUMBER: 114:92279  
TITLE: New columnar liquid crystals. Correlation between  
molecular structure and mesomorphic behavior  
AUTHOR(S): Bonsignore, S.; Cometti, G.; Dalcanale, E.; Du  
Vosel, A.  
CORPORATE SOURCE: Ist. G. Donegani, Novara, I-28100, Italy  
SOURCE: Liquid Crystals (1990), 8(5), 639-49  
CODEN: LICRE6; ISSN: 0267-8292  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ED Entered STN: 09 Mar 1991  
GI



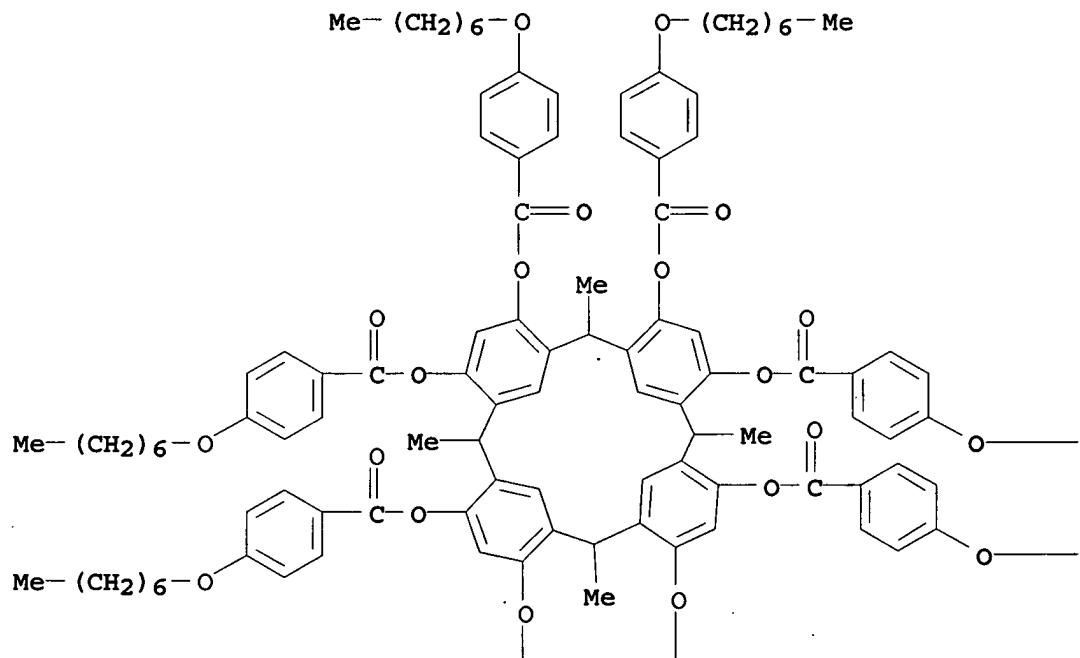
AB The effect of mol. structural changes on the mesomorphic nature of a new class of macrocyclic columnar liquid crystals is reported. Twenty-six new compds. with general mol. structure I were prepared, characterized and compared. Only dodecasubstituted ester derivs. exhibit thermotropic mesophases. The design of mesogens based on these new, unusual macrocyclic cores requires the presence of the following structural elements: 12 aliphatic side chains, esters as bridging units and small R groups on the core.

IT 131356-38-2P 131433-88-0P 131484-82-7P  
(liquid crystal, preparation and transition temps. of)

RN 131356-38-2 HCPLUS

CN Benzoic acid, 4-(heptyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.1.3,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)  
(CA INDEX NAME)

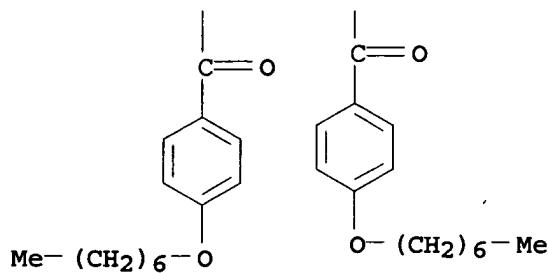
PAGE 1-A



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 $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$

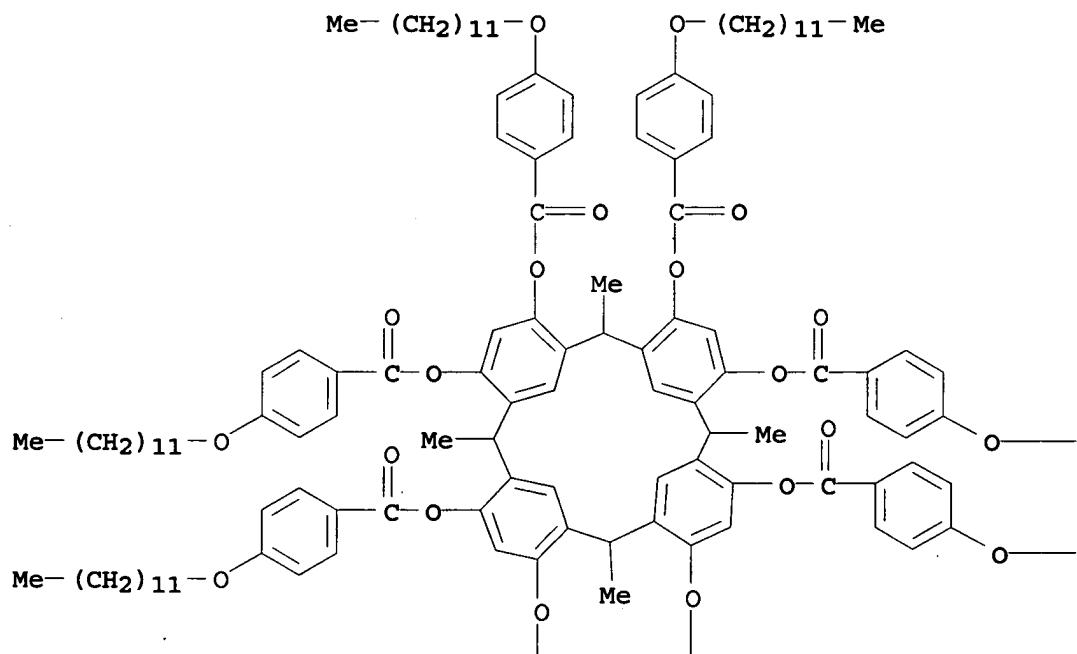
PAGE 2-A



RN 131433-88-0 HCPLUS

CN Benzoic acid, 4-(dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)  
(CA INDEX NAME)

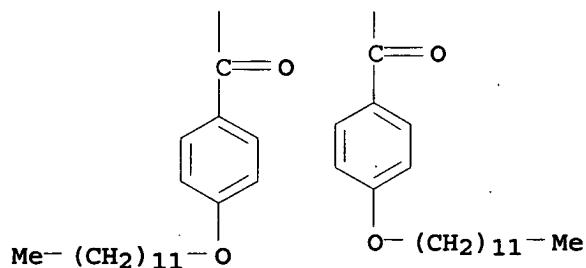
PAGE 1-A



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—(CH<sub>2</sub>)<sub>11</sub>—Me

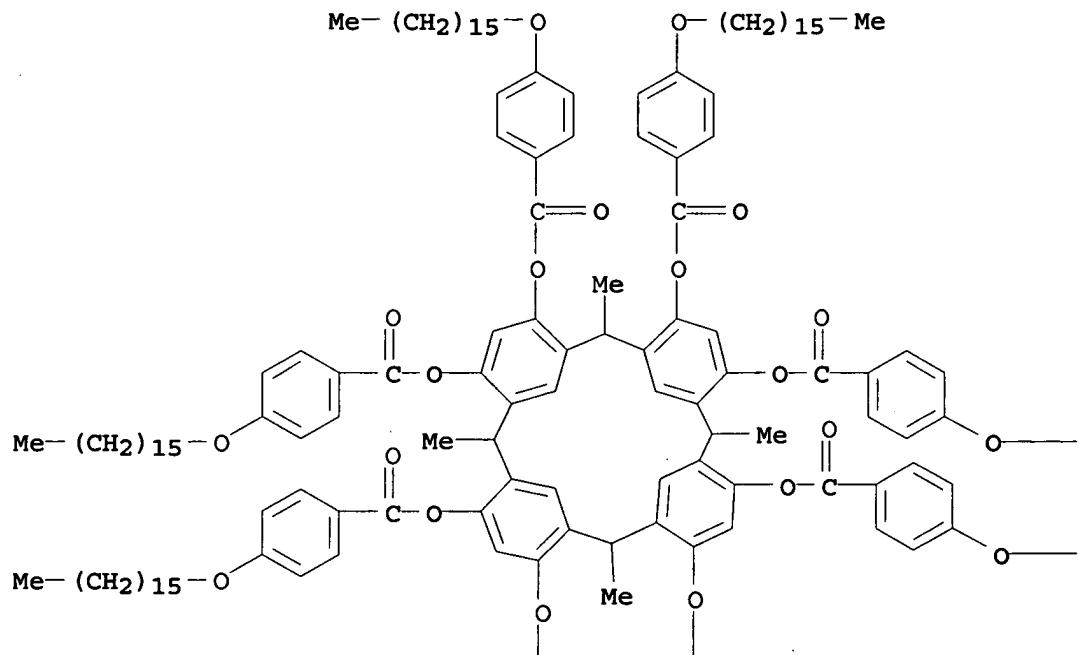
PAGE 2-A



RN 131484-82-7 HCAPLUS

CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

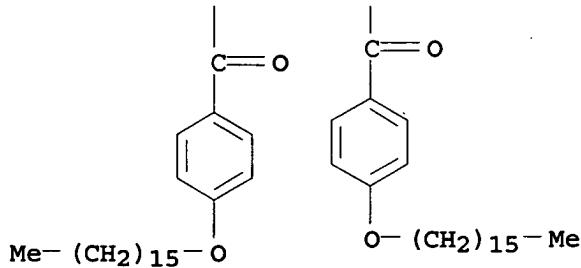
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 $\text{---}-(\text{CH}_2)_{15}-\text{Me}$  $\text{---}-(\text{CH}_2)_{15}-\text{Me}$

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CC 75-11 (Crystallography and Liquid Crystals)  
 IT 126769-43-5P 126769-44-6P 126769-45-7P 126769-46-8P  
 126769-47-9P 126966-78-7P 126966-79-8P 126966-83-4P  
 131256-92-3P 131356-36-0P 131356-37-1P 131356-38-2P  
 131356-39-3P 131356-40-6P 131356-41-7P 131356-43-9P  
 131383-05-6P 131383-06-7P 131383-07-8P 131433-83-5P  
 131433-84-6P 131433-85-7P 131433-86-8P 131433-87-9P  
 131433-88-0P 131484-82-7P  
 (liquid crystal, preparation and transition temps. of)

L44 ANSWER 41 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1991:6001 HCPLUS  
 DOCUMENT NUMBER: 114:6001  
 TITLE: Diazo-coupling with a resorcinol-based cyclophane.  
 A new water-soluble host with a deep cleft  
 Manabe, Osamu; Asakura, Kazumichi; Nishi,  
 Tadahiko; Shinkai, Seiji  
 AUTHOR(S):  
 CORPORATE SOURCE: Fac. Eng., Nagasaki Univ., Nagasaki, 852, Japan  
 SOURCE: Chemistry Letters (1990), (7), 1219-22  
 CODEN: CMLTAG; ISSN: 0366-7022  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 12 Jan 1991  
 GI

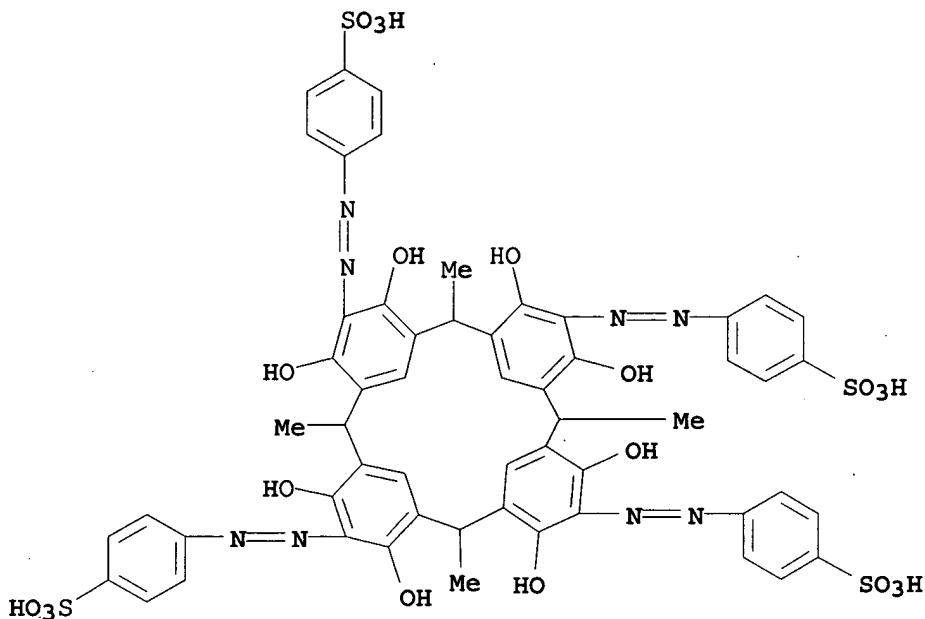
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A new water-soluble host mol. I was synthesized by the diazo-coupling reaction of a resorcinol-based tetrameric cyclophane II and p-sulfonatobenzenediazonium. In aqueous systems the product included large guest mols. such as adamantane, pyrene, and coronene, with association consts. of 2.0-4.6 + 104 M-1.  
 IT 130839-64-4P  
 (preparation and association constant of components of)  
 RN 130839-64-4 HCPLUS  
 CN Benzenesulfonic acid, 4,4',4'',4'''-[(4,6,10,12,16,18,22,24-octahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-5,11,17,23-tetrayl)tetraakis(azo)tetraakis-, tetrasodium salt, compd. with tricyclo[3.3.1.13,7]decane (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 130839-63-3  
 CMF C56 H48 N8 O20 S4 . 4 Na

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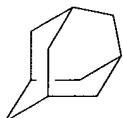


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●4 Na

CM 2

CRN 281-23-2  
 CMF C10 H16

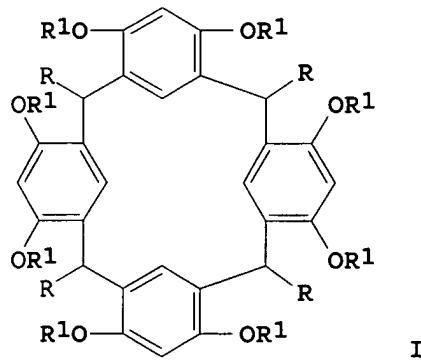


CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 IT 130839-64-4P 130839-65-5P 130839-66-6P  
 (preparation and association constant of components of)

L44 ANSWER 42 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1990:138443 HCPLUS  
 DOCUMENT NUMBER: 112:138443  
 TITLE: Characterization of high-molecular-weight  
 macrocycles by desorption chemical-ionization mass  
 spectrometry  
 AUTHOR(S): Guglielmetti, Gianfranco; Dalcanale, Enrico;

CORPORATE SOURCE: Bonsignore, Stefano; Vincenti, Marco  
 SOURCE: Ist. Guido Donegani S.p.A., Novara, 28100, Italy  
 Rapid Communications in Mass Spectrometry (1989), 3(4), 106-9  
 CODEN: RCMSEF; ISSN: 0951-4198

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 13 Apr 1990  
 GI



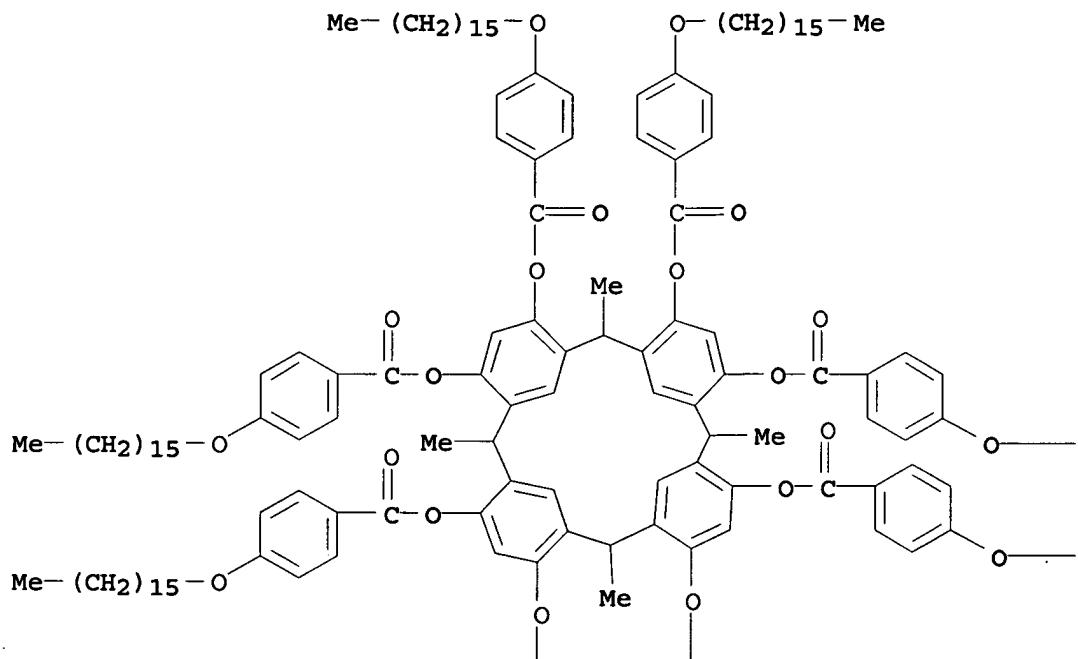
AB A series of multiarmed macrocycles [I; R = (CH<sub>2</sub>)<sub>n</sub>Me; R<sub>1</sub> = (CH<sub>2</sub>)<sub>n</sub>Me, CO(CH<sub>2</sub>)<sub>n</sub>Me, COC<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>Me-p, COC<sub>6</sub>H<sub>4</sub>O(CH<sub>2</sub>)<sub>n</sub>Me-p] with mol. wts. up to 4400 Da was studied by desorption chemical ionization. Both neg.- and pos.-ion spectra exhibited excellent signal-to-noise ratio, despite the limited amount of material sampled (0.1-1 pmol). The mol. ions generally represent the base peaks of the spectra, but the extent of fragmentation increases as the source temperature is raised.

IT 121722-10-9  
 (neg.-ion desorption chemical-ionization mass spectrum of)

RN 121722-10-9 HCPLUS

CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

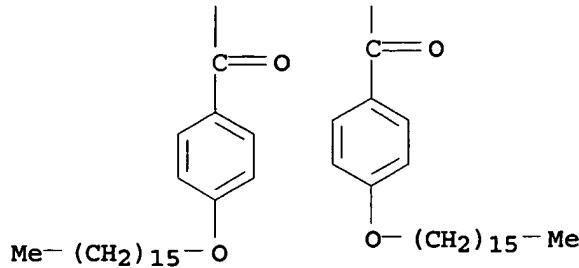
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—(CH<sub>2</sub>)<sub>15</sub>—Me

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CC 22-8 (Physical Organic Chemistry)

Section cross-reference(s): 80

IT 121722-10-9 125691-68-1

(neg.-ion desorption chemical-ionization mass spectrum of)

L44 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:468077 HCAPLUS

DOCUMENT NUMBER: 111:68077

TITLE: Macroyclic tetramers having columnar tridimensional mesophases

INVENTOR(S): Dalcanale, Enrico; Bonsignore, Stefano; Du Vosel, Annick

PATENT ASSIGNEE(S): Montedison S.p.A., Italy

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

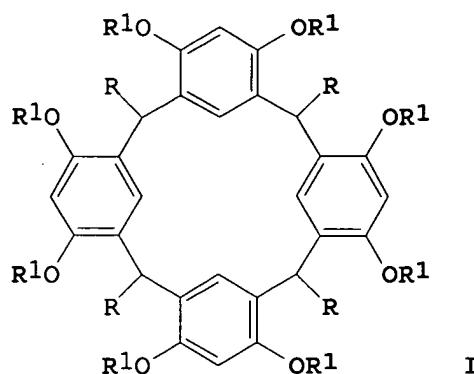
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 300800	A1	19890125	EP 1988-306722	19880721
EP 300800	B1	19911016		<--
R: CH, DE, FR, GB, IT, LI, NL				
US 4918217	A	19900417	US 1988-221609	19880720
CA 1289968	C	19911001	CA 1988-572566	19880720
JP 01104029	A	19890421	JP 1988-182748	19880721
JP 05029389	B	19930430		<--
PRIORITY APPLN. INFO.:			IT 1987-21370	A 19870721
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OTHER SOURCE(S): MARPAT 111:68077

ED Entered STN: 20 Aug 1989

GI



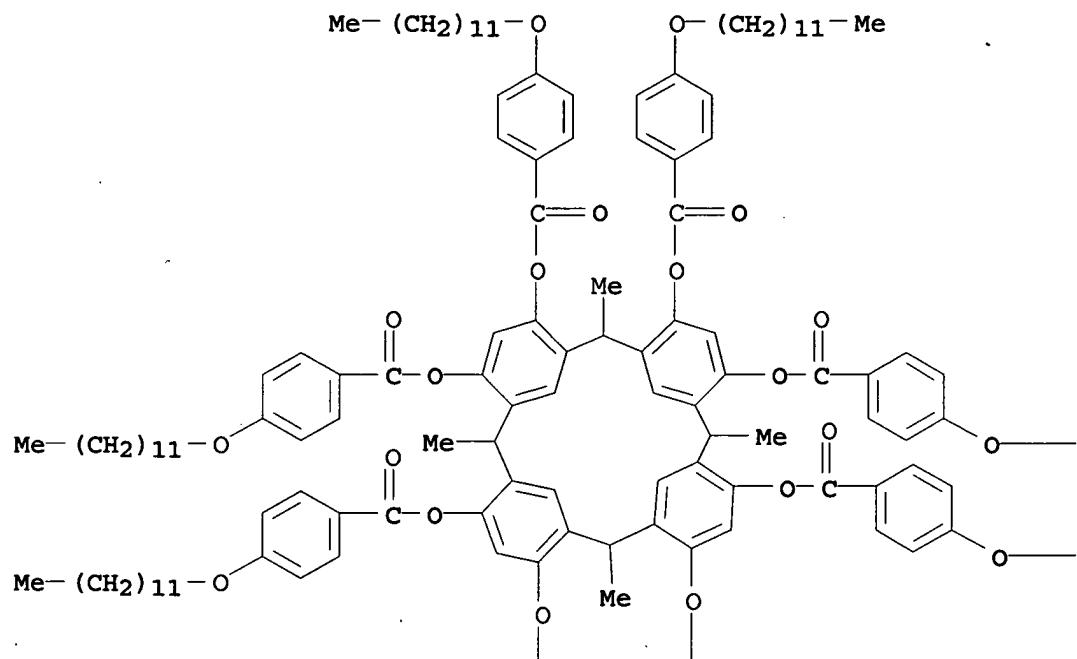
AB The title macrocyclic tetramers, which form stable, columnar, tridimensional mesophases, have the formula I (R = C1-3 alkyl; R1 = C1-10 alkylcarbonyl, C1-11 alkoxy-p-benzoyl, or C1-11 alkyl-p-benzoyl). These compds. are useful in memory devices, nonlinear optical devices, and electrooptical display devices. Thus, 3,5,10,12,17,19,24,26-octadecanoyloxy-r-1,c-8,c-15,c-22-tetramethyl[14]metacyclophane, prepared by reacting the 3,5,10,12,17,19,24,26-octahydroxy derivative with palmitoyl chloride, showed a tridimensional columnar mesophase-isotropic phase transition.

IT 121722-09-6P 121722-10-9P  
(preparation of, having columnar tridimensional mesophase for electrooptical display applications)

RN 121722-09-6 HCPLUS

CN Benzoic acid, 4-(dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)  
(CA INDEX NAME)

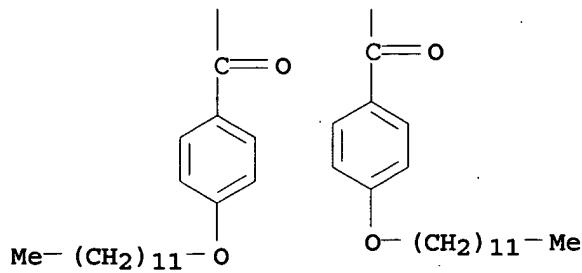
PAGE 1-A



PAGE 1-B

—(CH<sub>2</sub>)<sub>11</sub>-Me—(CH<sub>2</sub>)<sub>11</sub>-Me

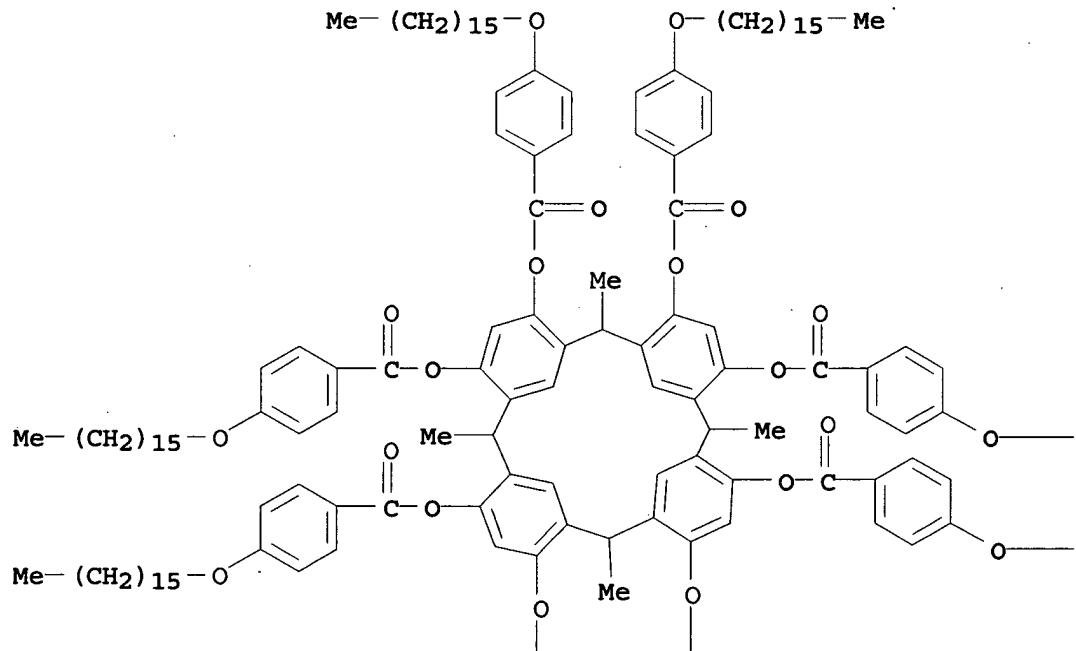
PAGE 2-A



RN 121722-10-9 HCPLUS

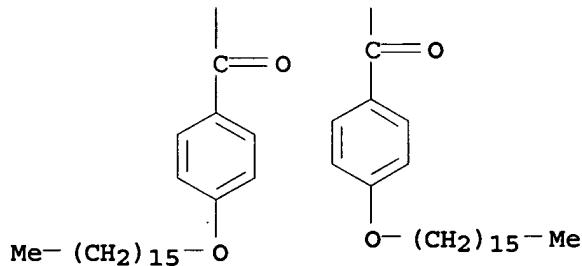
CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13.7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

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PAGE 1-B

PAGE 2-A



IC ICM C07C069-33  
ICs C07C069-92; G02F001-13  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25, 75  
IT 121722-06-3P 121722-07-4P 121722-08-5P 121722-09-6P  
121722-10-9P 121740-93-0P  
(preparation of, having columnar tridimensional mesophase for electrooptical display applications)

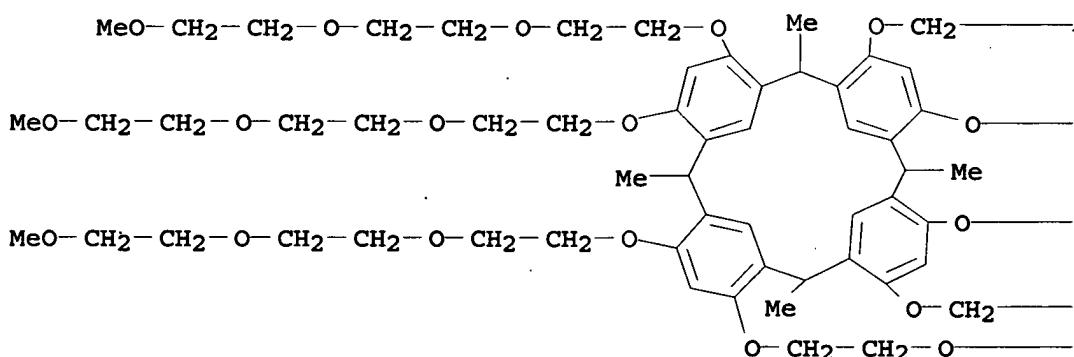
L44 ANSWER 44 OF 44 HCPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1978:189387 HCPLUS  
DOCUMENT NUMBER: 88:189387  
ORIGINAL REFERENCE NO.: 88:29777a,29780a  
TITLE: Octopus molecules in the cyclotrimeratrylene  
series  
AUTHOR(S): Hyatt, John A.  
CORPORATE SOURCE: USA  
SOURCE: Journal of Organic Chemistry (1978),  
43 (9), 1808-11  
CODEN: JOCEAH ISSN: 0022-3263

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 88:189387  
 ED Entered STN: 12 May 1984  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Cyclotriveratritylene (I) was converted into a series of oligo(ethylene glycol) ether derivs. II (n = 1-4; R = Me, Et, Bu) (octopus mols.) capable of adopting cavity-containing conformations and having complexing properties typical of crown ethers. Analogous derivs. of macrocycle III do not show crown-ether behavior because of lack of conformational rigidity. The length of polyether arms is of less importance than the stereochem. and conformational rigidity of the framework to which they are attached.  
 IT 65339-01-7  
 (formation of octopus mol. from)  
 RN 65339-01-7 HCPLUS  
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[2-[2-(2-methoxyethoxy)ethoxy]ethoxy] - 2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

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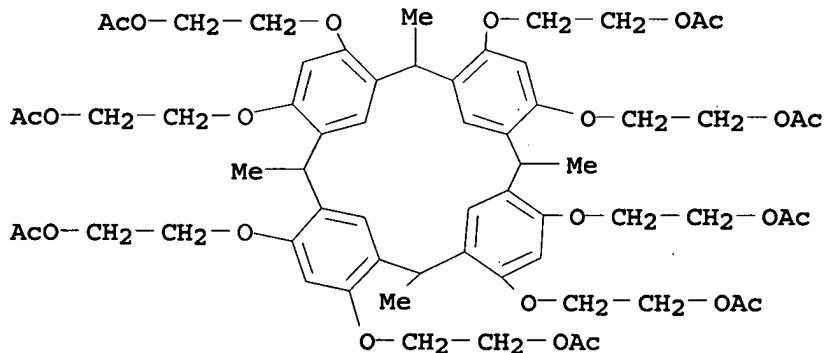
— CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OMe— CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OMe— CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OMe— CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OMe— CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—OMe

IT 65338-99-0P 65339-00-6P

(preparation of)

RN 65338-99-0 HCAPLUS

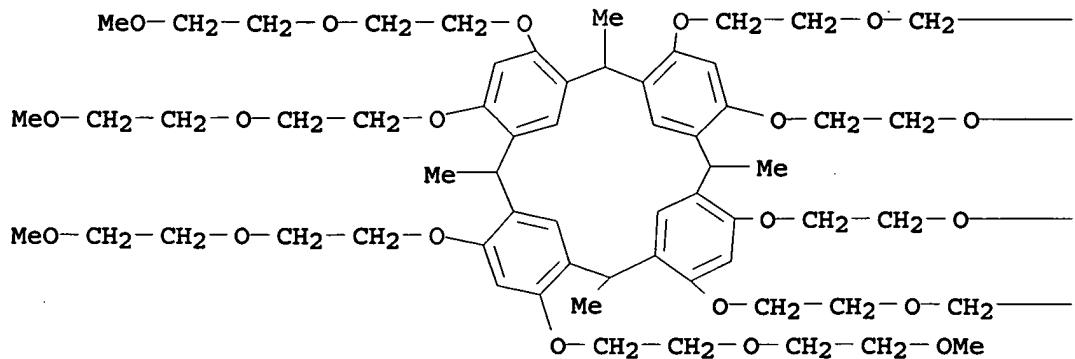
CN Ethanol, 2,2',2'',2''',2'''',2''''',2''''''-[ (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octaacetate (9CI) (CA INDEX NAME)



RN 65339-00-6 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[2-(2-methoxyethoxyethoxyethoxyethoxyethoxy)-2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

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PAGE 1-B

$$-\text{CH}_2-\text{OMe}$$

$$\text{---CH}_2\text{---CH}_2\text{---OMe}$$

$$-\text{CH}_2-\text{CH}_2-\text{OMe}$$

—CH<sub>2</sub>—OMe

CC 22-1 (Physical Organic Chemistry)  
IT 65338-98-9 65339-01-7 65378-51-0  
      (formation of octopus mol. from)  
IT 65338-99-0P 65339-00-6P  
      (preparation of)

=> d his nofile

(FILE 'HOME' ENTERED AT 13:38:51 ON 03 DEC 2007)

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 SEL RN

FILE 'REGISTRY' ENTERED AT 13:39:49 ON 03 DEC 2007  
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 125748-07-4/BI OR 156281-11-7/BI OR 1927-95-3/BI OR  
 211427-64-4/BI OR 24424-99-5/BI OR 27955-94-8/BI OR  
 29654-55-5/BI OR 5001-18-3/BI OR 5292-43-3/BI OR 623-05-2/B  
 I OR 65338-98-9/BI OR 683227-72-7/BI OR 683227-73-8/BI OR  
 683227-74-9/BI OR 683227-75-0/BI OR 683227-76-1/BI OR  
 75-07-0/BI OR 99181-50-7/BI)  
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 L4 STR 125748-07-4  
 L5 39 SEA SSS SAM L4  
 L6 STR L4  
 L7 2 SEA SSS SAM L6  
 L8 15797 SEA ABB=ON PLU=ON 11417.1.2/RID  
 L9 907 SEA SSS FUL L4  
 L10 3 SEA ABB=ON PLU=ON L9 AND L2  
 SAV L9 LEE208B/A  
 L11 2 SEA SUB=L9 SSS SAM L6  
 L12 76 SEA SUB=L9 SSS FUL L6  
 L13 54 SEA ABB=ON PLU=ON L12 NOT 1-100/N  
 L14 4 SEA ABB=ON PLU=ON L2 AND TRICYCLO?  
 L15 114651 SEA ABB=ON PLU=ON 638.8.1/RID  
 L16 2 SEA ABB=ON PLU=ON L9 AND L15  
 L17 165 SEA ABB=ON PLU=ON L8 AND L15  
 L18 2 SEA ABB=ON PLU=ON L17 AND L9  
 SAV L12 LEE208C/A  
 L19 STR  
 L20 50 SEA SSS SAM L19  
 L21 630432 SEA ABB=ON PLU=ON 46.157.1/RID  
 L22 STR  
 L23 50 SEA SSS SAM L22  
 L24 525267 SEA ABB=ON PLU=ON 16.138.1/RID  
 L25 292 SEA ABB=ON PLU=ON L8 AND (L21 OR L24)  
 L26 5 SEA ABB=ON PLU=ON L25 AND L9  
 L27 1 SEA ABB=ON PLU=ON L26 AND L2  
 L28 2 SEA ABB=ON PLU=ON L17 AND TETRAMETHYLPENTACYCLO?  
 L29 617 SEA ABB=ON PLU=ON L8 AND TETRAMETHYLPENTACYCLO?  
 L30 289 SEA ABB=ON PLU=ON L29 NOT 1-100/N

FILE 'HCAPLUS' ENTERED AT 14:12:18 ON 03 DEC 2007

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 L32 2 SEA ABB=ON PLU=ON L16  
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 L34 5 SEA ABB=ON PLU=ON L26  
 L35 2 SEA ABB=ON PLU=ON L28  
 L36 55 SEA ABB=ON PLU=ON (L31 OR L32 OR L33 OR L34 OR L35)  
 L37 1 SEA ABB=ON PLU=ON L36 AND L1  
 L38 44 SEA ABB=ON PLU=ON L36 AND (1840-2003)/PRY,AY,PY  
 L39 252 SEA ABB=ON PLU=ON L30  
 L40 37 SEA ABB=ON PLU=ON L39 (L) PHOTO?  
 L41 27 SEA ABB=ON PLU=ON L40 AND ?RESIST?

L42 22 SEA ABB=ON PLU=ON L41 AND (1840-2003)/PRY,AY,PY  
L43 9 SEA ABB=ON PLU=ON L42 AND L38  
L44 44 SEA ABB=ON PLU=ON L38 OR L43